

# Fast Track *to*

# APPLE

What is Apple?



All about the iPod



Macintosh Computers



iPhones



What is Mac OS X?



The Switcher's Guide



The iLife Suite



Software



# Fast Track to **Apple**

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# Life in the iLane

Except for the iPod—just except for that one piece of hardware—Apple is niche. Niche, niche, niche—so much so, you’re probably wondering why we bothered to bring out this book. Who needs a Mac anyway?

Simple answer. We thought we’d educate you that little bit, so you get out of the mindset that there’s no need to even think Apple. We aren’t aiming at making converts out of any of you. We aren’t taking a stance. We aren’t saying Apple is great (or that it’s not). We just want to speak a little about what’s in that third computing camp.

History is sometimes interesting, and we start off with some about Apple—including, yes, why and when it became niche. (You can’t think Apple without thinking “niche.”) We talk a bit about the iPod—its variants and what exactly is so damn cool about it. Then of course there’s the iPhone: why so much buzz? You’ll find out exactly why there is so much buzz.

Then, coming to Apple computers, we first talk about Apple’s range of Desktops and laptops—an introduction that, we hope, will increase your awareness of what’s what in that space. Chapter 5 talks about OS X, what’s so cool about it, and since we aren’t biased, we also tell you what’s not cool about it. Chapter 6, then, is a “switcher’s guide”—if you get a new Apple computer, here’s how you move everything over from your Windows computer to your pretty new Mac. (Yes, they *are* pretty.)

Under software, you’ll find chapters on the iLife suite, which comes bundled with Macintosh computers. We then speak about essential software for a new Mac: yes, there most certainly isn’t as much out there for Macs as for Windows, but you get what you need.

Whether you have a Mac, or whether you don’t, whether you bought one after reading this, or whether you didn’t, we think you should know something about Apple and their line-up. We hope this book serves that purpose.

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# History of Apple



**T**he world either loves or hates Apple—whether it's the new generation falling over themselves over the iPod, Mac fans gushing over the new iMac, or the world in general swooning over the upcoming iPhone. Where did all this madness begin?



## 1.1 The Early Years

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Steven Paul Jobs (co-founder and chief executive officer of Apple, Inc. and co-founder of Pixar) was introduced to Stephen Wozniak (co-founder of Apple, Inc.) by a mutual friend, Bill Fernandez, in 1971. Jobs and Woz developed a companionship over the next few years and started thinking of making a commercial logic board. Woz was to do the engineering and Jobs the marketing of the product. Manufacturing and selling a product publicly for profit, however, would require a corporate identity, and the geek duo had none. After much cajoling, Stephen Wozniak signed the ten-page document that would give a 90 per cent stake in the newly-established company in equal divisions to both Jobs and Woz. Ron Wayne, a friend and helper of Jobs from his former employment at Atari, was to receive the remaining 10 per cent. After a series of rejected names, Woz came up with the name “Apple,” and it clicked as the perfect name to both of them. It sent out a message that this was a company willing to go against tradition and try out things differently, and above all, it preceded Atari—their main competitor at the time—in the Address Book.

Paul Terrell, the owner of *The Byte Shop*, a computer store in their locality, expressed an interest in the machine when Jobs approached him but demanded that it should require no manual assembling. If Jobs and Woz would be able to meet his requirements, he promised to order fifty units at \$500 a piece. They had an order worth \$25,000. “This was the biggest single episode in all of the company’s history,” said Woz. “Nothing in subsequent years was so great and so unexpected.” They were on the verge of starting a computer business.

Certain that he had already sold fifty computers before even beginning work on them, Jobs ordered the parts needed to build the computer at a big supply house, Kierulff Electronics. But, of course, he did not have any money to buy the components, and the shop owner declined to sell the goods on credit unless Steve could prove his credibility. When asked how he was going to pay for the

goods, Jobs mentioned the order from *The Byte Shop*. Bob Newton, the manager, brushed him off with the promise that he would call Terrell and confirm the order later.

Jobs, whom Newton later described as “an aggressive little kid who didn’t present himself very professionally,” would not take no for an answer and refused to budge until the manager had spoken to Terrell in front of him. It requires determination and guts to stand up to the manager of a huge store at the age of seventeen, and Jobs had that in abundance. The call was made, the order was confirmed, and the components required were made available to Wozniak. However, they would have to pay for them within thirty days.

## Apple I

Steve Wozniak had the amazing ability to simplify existing technology. He had earned the reputation of making logic boards with the fewest possible number of chips. True to form, he came up with a very advanced logic board that was based on the MOS Technology 6502 microprocessor and had a built-in video terminal and 8 kilobytes of on-board RAM memory (it was revolutionary stuff at that time). They named it the Apple I, sending out a clear signal that Apple Computer, Inc. was officially in the game, and that this was just the beginning.

Paul Terrell, when he had presented the order to Steve, had in mind a fully-assembled computer ready to be plugged in and used out of the box. However, this was an outrageous idea at that time. What Steve showed up with 30 days later was simply a dozen circuit boards without even the cases. There was no monitor, keyboard, or power supplies. Jobs shared the vision that Terrell had. He dreamed of making an all-in-out personal computer some day, but they did not have the resources to turn this vision into reality at that time. Terrell, though disappointed with the end result, fulfilled his promise so that he would have something to offer his customers in his newly-opened store. He bought the twelve boards and paid them \$6,000. Apple

Computer, Inc. had made its first sale at a profit of 100%. Steve Wozniak, who was at that time also employed with Hewlett-Packard, made an almost equal profit from the sale of 150 Apple I units by the end of the year. Apple had a turnover of approximately \$100,000 in their first year.

## Apple II

However, the real jackpot for the company was the second computer designed by Woz, the Apple II. However, it wasn't such a huge success because of Wozniak's exceptional design; it was Steve Jobs' determination and force of will that led to the widespread success of the Apple II and firmly established Apple Computer as the top dog in the computer industry. He knew that for the Apple II to be a success, it had to be promoted well. In his mind, he envisioned a grand scale launch for their new product. To achieve this end, he called the Regis McKenna Advertisement Agency, the company that looked after the advertising for Intel. It took Jobs several calls a day for weeks on end to finally be allowed to speak to Mr McKenna himself.

When both the Steves turned up at McKenna's office, they were turned down by him even after having offered a detailed overview of their product and the plans they had for the future. Jobs refused to leave the office until McKenna agreed to take up Apple Computer as a client. In a decision that later proved profitable to both parties, McKenna agreed to handle the advertising needs of Apple. He came up with the daring and unconventional idea of advertising the Apple II in the national issue of *Playboy* magazine. He also advised Jobs to meet Don Valentine, a board member of his own agency and Atari. Valentine, in turn, suggested Steve to rope in Mike Markkula. Markkula, a former marketer for Intel, saw the potential in Apple Computer and decided to join them as an investor for a one-third stake in the company. He also brought in Mike Scott who took over as the president of the company, but had no stake in the holdings. He did get an annual salary of \$20,001, a dollar more than either of the three shareholders received. Rod Holt, a friend of Steve Jobs and an engineer who had

made the Apple II dissipate heat without a fan, was to have a stake of ten per cent in the company.

The Apple II was launched at the West Coast Computer Faire amidst great fanfare in 1977. “When the doors to the Faire were thrown open at 10 A.M., the first visitors to stream in found themselves face-to-face with the sleekest, most handsome, most professional-looking personal computer the world had ever seen. And when the guys manning the booth pulled the cases open, the hobbyists, the nerds, media people, and others saw the most advanced motherboard anyone had ever dreamt of. Woz had outdone himself once again, with a design that crammed onto the board sixty-two chips and ICs—an unheard-of achievement. And Jobs’ overbearing demands that every solder connection be done with a neat, attractive straight line gave the workmanship a quality look that was as pleasing and surprising as it was unsurpassed.

People crowded around, unwilling to believe that the electronics in those small boxes could possibly be responsible for creating the dynamic images in vivid color on the giant television screen. Steve Jobs, looking almost dapper in his first suit had to continually whip away the draperies to prove that there was no big computer hidden out of sight.” This is an excerpt from *iCon: Steve Jobs—The Greatest Second Act in the History of Business*, by Jeffrey Young and William Simon, which sums up the fabulous response the Apple II received on its launch. Needless to say, it was a successful machine, success of the highest order. It made Apple’s cash registers overflow, and established Apple as a primary player in the computer business.

### **Apple III**

Ben Parker says to Peter Parker in the Spiderman movie that “With great power comes great responsibility.” This was true in the case of Apple too. However, due to the anti-corporate culture at Apple, it did not take the responsibility seriously. The company began expanding and by 1980, the year of the release of the Apple III, Apple had grown into a large multinational corporation. However,

there was a lot of mismanagement, which led to the relative failure of the new machine. Markkula sensed the trouble Apple might land into and hired many well-known corporate managers to make Apple a “real company.” However, things kept getting difficult as the sales of the Apple III kept falling, and Apple was forced to lay off 40 employees, the first ever layoff at Apple Computer.

Though it might sound like a very odd problem today, the buyers of computers at that time had no idea what could be done with it. It was only the novelty of owning the latest and the greatest and of having a cool Apple product that kept the sales going. It wasn’t a good prospect for the company from the future perspective. Things took a drastic change for the better when the first word processing program called AppleWriter, developed by Paul Lukas, hit the stores. It worked in tandem with the first printer from Apple called Silentype and gave businesses and schools a reason to use computers in their daily tasks. Then came the other applications—a stock market package, a chequebook-balancing application, and finally, Visicalc—the first ever computer spreadsheet, the beginning of wonderful things. Sales doubled!

## 1.2 Glorious Times

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Xerox PARC (Palo Alto Research Center), the highly secretive lab of geniuses in the field of computing, wanted Jobs to visit their R&D labs along with his comrades to have a look at what the engineers were working on and see if they could work out a partnership. Jobs was only too happy to oblige them. The significance of this moment in the history of personal computing cannot be overstated. This visit was the reason personal computing is what it is today.

When Steve Jobs saw how those engineers had taken the way people could interact with computers to a whole new dimension, he was excited beyond measure. “Why aren’t you doing anything with this? This is the greatest thing! This is revolu-

tionary!!” They discovered the graphical user interface in those labs—the mouse, the windows, the WYSIWYG word processing program, a drawing application, the menus. They were dumbstruck that it was possible to use a computer without typing in a single line of code, the standard way of interfacing with a computer in those days. It wasn’t just a striking revelation for the Apple team: even the engineers at Xerox were awed by the vision of the visitors. PARC scientist Larry Tessler was quoted as saying, “What impressed me was that their questions were better than any I had heard in the seven years I had been at Xerox. From *anybody*—Xerox employee, visitor, university professor, student. Their questions showed that they understood all the implications, and they understood the subtleties, too.” He left Xerox and joined Apple as vice president and chief scientist.

Meanwhile, the most successful Initial Public Offering in the history of business took place on a Friday in the second week of December, 1980. It was the IPO of Apple Computer, Inc. and the shares sold at a heady pace. 4.6 million shares were sold in under an hour. Two young men without college degrees, money, or experience had, within a short period of less than five years, made it to the annual list of the 500 most profitable US industrial corporations. Steve Jobs was worth \$217.5m. He had joined the elite group of the richest men in America.

After the financial success, he wanted more fame. He wanted to be known as the inventor of a great new machine. He was involved in the development of the newest project from Apple at that time, the Lisa. However, he did not have full control over the Lisa and therefore did not want to remain involved in it. He dropped it and took over a small experiment with a new kind of all-in-one concept computer headed by Jef Raskin. Steve Jobs was in a position of power and Raskin was a mere employee at Apple with a really small personal project on his hands, the Macintosh. Raskin already had a working prototype with the display and keyboard designed into a single compact unit. The Macintosh designed by him and his small team of engineers, however, did

not feature the interface Jobs had learnt about at Xerox PARC and bestowed on the Lisa.

Raskin had wanted his computer to be a “toaster.” He had designed a *complete* computer. It was ready to be taken out of the box, plugged in, and be used. No setup was required. Absolutely no knowledge of computers was required to get started with a Macintosh. With this basic framework already in place, Steve set five of his best engineers to the task of making the Macintosh according to his wishes. Raskin sensed the death knell sounding for him and in a desperate, last ditch attempt to claim ownership of his personal project, he made a plea to Scott and Markkula. However, it was Jobs who had clout in the company and he was the one who prevailed. Raskin was officially booted off the Macintosh team. “If the world were always just, Jef Raskin would be remembered as the genius behind the Macintosh. The world is not always just, and history does not always remember those who should be its heroes... The true father of the Mac as the world knows it was Steve, its adoptive father.” (Excerpt from *iCon: Steve Jobs—The Greatest Second Act in the History of Business*, by Jeffrey Young and William Simon.)

In February that year, Woz, the gentle person and highly revered genius at Apple, was seriously injured in a plane crash. He returned to the company only briefly before he left it for good. He had never been a man who craved recognition. He just wished to do what he did best—engineering. Perhaps this is the reason the original genius behind Apple Computer doesn’t feature prominently in the history of Apple. This is the last we see of him as a member of Apple Computer, Inc.

## Lisa

The Lisa, the official and most important project for Apple at the time, was doomed to be a failure. In an effort to cram in every known hardware and software feature into the product, it had turned into a bloated machine that tried to do everything and did none of it effectively. In addition to this, the machine had become

very expensive due to the sheer number of hardware parts it had. It was built around five motherboards and a number of custom components. The Lisa team thought they had it right. After all, theirs was the first computer that had a mouse and windows.

However, they were unaware of the huge strides the Macintosh development was taking. Steve had moved the whole Macintosh division into a small, separate building and had basically severed all contact with employees who weren't on the Mac team from the R&D quarters. Burrell Smith, the chief designer of the Mac, had outdone himself. Within a matter of a few weeks, he had made a small computer that had a single logic board and contained no custom components. Everything was bought from regular electronic shops. It cost a fraction of what the Lisa did, worked twice as fast, and had a GUI that was better than the Lisa's. There were two products in the Apple headquarters that competed not with products from other companies, but among themselves.

### **When Steve met Bill**

By this time, Jobs realised that they would never be able to meet the deadline of releasing the Macintosh if they kept going at this pace. In a stroke of sudden genius, Jobs decided that all the software for the new machine would not be developed by Apple. He saw the vast number of young and talented programmers out there and decided to use them to have software developed for the Macintosh. One such programmer was Bill Gates, an intensely focused and promising one at that. Gates was developing software for the IBM PC at that time and Steve invited him to Cupertino, the company's headquarters, to have a look at the Lisa and Macintosh development. What Gates saw was enough to give him an inkling of how advanced these systems were compared to the IBM PC. He also saw it as a potential leverage for Microsoft if any one or both of the computers made an impact in the market. He agreed.

Mike Scott had been voted out of the company and they were in need of a president to lead the company. It was decided that John Sculley, then the president of Pepsi, be installed as the presi-



dent of Apple. However, he was very hesitant. Steve Jobs arranged a meeting with him and asked a question that was destined for fame, “Are you going to sell sugared water for the rest of your life when you could be doing something really important?” John Sculley acquiesced in his request and was declared the new president of Apple Computer, Inc.

The Lisa was launched. It came and disappeared. It was probably the biggest flop in the history of computers. Then there came the commercial that marked Apple as the coolest company in the field of computers and made people impatient to lay their hands on a Macintosh. “When the Super Bowl commercial aired, viewers were treated to an ad unlike any they had seen before. The spot depicted scenes of men with shaved heads dressed in gray, prison-like garb, sitting in rows on long benches, hollow-eyed, watching as a Big Brother-like figure lectures to them from a giant screen. And attractive young blond woman, running from goon oppressors, dashes into the chamber, approaches the screen, spins around to build up momentum with the huge sledgehammer she’s carrying, and then lets it go, smashing into the center of the giant screen, which explodes in a blinding flash of light. At that point, the brief voice-over begins, emphasized by the same words appearing on-screen: ‘On January 24th, Apple Computer will introduce Macintosh. And you’ll see why 1984 won’t be like ‘1984’.

The ad was so spectacular, so distinctively different, so stunningly original that television stations all over the country replayed it on their evening news, giving Apple millions of dollars’ worth of instant free advertising.” (Excerpt from apple-history.com: [www.apple-history.com/body.php?page=gallery&model=128k&performa=off&sort=date&order=ASC](http://www.apple-history.com/body.php?page=gallery&model=128k&performa=off&sort=date&order=ASC)) On the 24th of that month, the Macintosh was launched by Steve Jobs in front of a large audience. He pulled it out of the small bag it was in and announced, “Now we’ve done a lot of talking about Macintosh recently, but today, for the first time *ever*, I’d like to let Macintosh speak for itself.” In front of a packed audience, the Macintosh introduced itself in what was the most mind-blowing

product launch ever.

“Hello, I’m Macintosh. It sure is great to get out of that bag!

Unaccustomed as I am to public speaking, I’d like to share with you a maxim I thought of the first time I met an IBM mainframe. NEVER TRUST A COMPUTER YOU CAN’T LIFT!

Obviously, I can talk, but right now I’d like to sit back and listen. So, it is with considerable pride that I introduce a man who’s been like a father to me... STEVE JOBS.”

It had an intuitive graphical user interface and was the smallest and best-looking computer in the market at the time. “It was built around the new Motorola 68000 chip, which was significantly faster than previous processors, running at 8 MHz. The Mac came in a small beige case with a black and white monitor built in. It came with a keyboard and mouse, and had a floppy drive that took 400 KB 3.5” disks—the first personal computer to do so. It originally sold for \$2,495.” (Excerpt from *iCon: Steve Jobs—The Greatest Second Act in the History of Business*, by Jeffrey Young and William Simon.) Apple sold an outlandish number of Macintoshes in the first hundred days, a number close to 70,000 units.

## 1.3 The Fall

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However, as with biggest first-generation products, the product had some severe flaws. The most major problem was the unavailability of software for the platform. The only company that was developing third-party software for the Mac was Microsoft. Apart from Microsoft Write, Paint, and Word, there was no other software you could install on your Mac. Compared to the thousands of software packages available for the IBM PC, the situation looked sad for Apple. The machine was not expandable, had a small black-and-white screen, too little RAM, and very little storage space. It was looked upon by consumers as a toy. Sales began falling drastically, and there was panic within the company. Apple was banking heavi-

ly on the success of the Macintosh and its failure would most likely mean bankruptcy for the company. Fortunately for the company, the Apple II was still selling well and was a constant source of healthy income for Apple. By now, Apple had established a healthy reputation for itself as being a cool and innovative company but had lost the trust of consumers that it could be relied upon. IBM was the company most people would bet their money on.

The man responsible for most of this trouble was, of course, Steve Jobs, and the blame fell squarely on him. Jobs was the Chairman of the board and the head of the Macintosh group at the time. John Sculley chucked him off the Macintosh division and handed the reins to Jean Louise Gassée. Jobs then began plotting against Sculley to have him evicted out of the position of CEO. The leadership of Apple was a political mess. Sculley became wise to Jobs' intentions and warned him that serious action would be taken against him if he did not quit his antics. Jobs apologised and made peace with Sculley, but continued contriving behind his back. His intentions were again reported to Sculley, who became livid. He called a board meeting, and Steve Jobs was stripped of all leadership responsibilities at Apple. He was allowed to stay on as a "product visionary," a post that had no importance or bearing on the company. It was just a compromise to keep the die-hard Apple loyalists and old-timers happy. Jobs soon left the company, along with four of Apple's top engineers, with the aim of starting a new computer company and beating Apple at its own game.

With Jobs out of the way, Sculley had the entire administration of Apple under his control. He had to fire about 1,200 employees and the company also suffered a quarterly loss. Microsoft, at that time, was preparing for the introduction of Windows 1.0, which was heavily inspired by the Mac's GUI. Sculley locked horns with Bill Gates over this and they came to an agreement that Microsoft would not use technology that was similar to the Mac platform in Windows 1.0. However, this contract made no mention of future versions of Windows, and Gates' lawyers made sure this loophole made it to the final

agreement. Apple lost exclusive rights to its GUI, the Mac's crown jewels.

The LaserWriter, an affordable laser printer, and PageMaker, the first desktop publishing program, were launched together for the Mac platform and rescued it from the brink of extinction. The two products worked perfectly together and positioned the Mac as a top-notch computer for desktop publishing. Sales started looking upwards and the cash registers began clinking again for Apple. The Mac soon started raking in healthy profits. Apple then launched the Mac II in 1987 which carried the upward trend. It addressed every problem the original Macintosh suffered from—it had ample storage space (an 80 MB hard drive), support for up to 20 MB of RAM, allowed the installation of a graphics card, and the screen was capable of displaying up to 16.7 million colours. The major stride forward was that it was a highly expandable machine. Apple started shipping a whopping number of 50,000 Macs per month. The stock market reflected the reversal of Apple's fortunes as the share price continued to rise.

While Apple was strictly following the policy of selling an integrated solution which bound the customer to buying both the hardware and software from Apple, tens of other companies had cropped up and thousands of IBM PC clones had practically flooded the market. So when Microsoft came out with Windows 3.0 in 1990, it already had a vast base of consumers who had the hardware required to run the operating system. Apple found itself in a tight spot.

Bill Gates had suggested to Apple a long time ago that licensing the operating system would yield a tremendous turnover for the company, but Apple had always believed strongly that an integrated solution was the way to go. Now, however, more than just a few people at Apple were jerked into thinking that Bill Gates might have been right after all. But when Michael Spindler was installed as the new chief operating officer at Apple, he abolished the idea declaring that it was “too late to license” the operating system.

## Phone and Newton

Then came the PowerBooks, in 1991, which proved to be another successful product in Apple's line-up. Apple also had a new type of product in the pipeline, the Newton. Apple called it a Personal Digital Assistant (PDA). Sculley spearheaded the Newton project and it was launched in August, 1993. However, the Newton flopped because it had poor handwriting recognition capabilities and was ahead of its time. Though the Newton did not help Apple, it gave birth to an entire new industry, which Palm catered to after a few years and established themselves as the major player in the PDA market.

Though Apple had seen some very good times under Sculley's reign, it was clear that he was not the ideal CEO for Apple because he had little idea about the computer industry. Sculley was removed from the position of CEO and offered the position of chairman of the board. He resigned from his post of the chairman of Apple's board of directors after some time. Michael Spindler was the new CEO.

Apple announced a new line of computers called Power Macintosh in 1994, the first Macs that used the PowerPC processor—a very fast processor developed by the joint effort of Motorola and IBM. The PowerPC processor was better than the best Intel chip in the market, and this made the Power Macs the fastest computers in the market. He also licensed the Mac operating system to various companies, Power Computing being one of them. It was a disaster in the making. Power Computing started offering cheaper computers than the Macintosh line and dragged down Mac sales. Apple earned a measly \$50 for every computer Power Computing sold. There was nothing in the deal for Apple.

The downward spiral continued. Apple kept losing customers and sales. Then Microsoft came out with Windows 95 in, well, 1995, and it had a lot of features of the Mac operating system, though implemented in a somewhat counter-intuitive fashion, and lacked the polish of the Mac OS. However, it performed bril-

liantly, and was cheaper by comparison. Businesses flocked to it and Mac market share fell further. Apple suffered a huge financial loss of \$68 million in that quarter. Spindler was dethroned and replaced by Gil Amelio, who saw a new, updated operating system as a key element to Apple regaining market share against Windows machines, but he finally gave up hope that the in-house development team would ever arrive at a finished product. He looked at three companies which could license their operating system to Apple—Sun Microsystems, Be, Inc. and, of all companies, Microsoft. Bill Gates saw this as a wonderful opportunity to outfit the Apple hardware with an operating system to get it going and squeeze out a signature on the intellectual property agreement that would give Windows the same charm the Mac operating system had. He admitted, “Apple is really good at human interface than we are.”

As these negotiations progressed, an engineer from Steve Jobs’ company, NeXT, called Ellen Hancock told him that NeXT had an operating system that was ideal for Apple’s computers. Ellen had the software checked out by a team of engineers and found it perfectly suited for Apple. They were ready if NeXT was. When the news was broken to Steve Jobs, he could not believe his ears. Overjoyed beyond control, he prepared himself for the sales pitch he would have to make in front of the Board of Directors at Apple. When the day came, he launched into an absorbing performance that was Jobs at his best. “If you think there’s something for you in NeXT, I’ll structure you any kind of deal you want—license the software, sell you the company, whatever you want.” Then came the main pitch: “When you take a close look, you’ll decide you want more than my software. You’ll want to buy the whole company and take all the people.”

The board was convinced and cast a unanimous vote in favour of Steve Jobs and the acquisition of NeXT. In late December 1996, Apple made an industry-shattering announcement that it would be acquiring NeXT, and that Steven Jobs would be returning to the fold as “special advisor.” Within a month of his return, Steve’s key

lieutenants from NeXT were in charge of software as well as hardware. They slowly assumed the most important roles in the company. *Fortune* magazine came out with an issue which had Apple as the cover story in February, 1997. The title read “Something’s Rotten in Cupertino,” and it focused on Apple’s poor state and Amelio’s role in bringing the company to that state, ignoring all the reforms he had done to reduce the losses the company was suffering. The story was written by a friend of Jobs, and it more than just hinted at Jobs’ being made the CEO of the company.

Gil Amelio was asked to resign from the company in July, 1997. When Gil had taken the job as Apple CEO, he told the board that he would need three years to nurse the company back to health. Now the board had fired him after a year and a half. Gil later regretted that he had not put a three-year “no fire” clause into the terms of his contract. Few people seem to take note of the most significant fact of Gil Amelio’s reign at Apple; when he took over, the company had enough money in the bank to survive for three months; when he departed, he left a legacy of \$3 billion in cash. Fred Anderson, chief financial officer for Apple, was put in charge of day-to-day operations, and Steve Jobs was made the interim chief executive officer of the company.

The first call he made was to, of all people, Bill Gates, and told him Apple was ready to grant him the user interface agreement—an agreement that would allow Microsoft to design a user interface like Apple’s. They made a deal that called for Microsoft to invest \$150 million in Apple and to continue to update and sell Microsoft Office for the Mac. It also bound Apple to bundle Internet Explorer as the default Web browser on all Macs. These announcements were met with boos and catcalls from the crowd gathered at Macworld, 1997.

Jobs, being the co-founder of Apple, instinctively understood some things about Apple that other CEOs failed to grasp. He knew it that the Mac OS was the reason people bought Apple computers and if other companies started selling computers that were capable

of running the Mac operating system, Apple would take a huge hit. Therefore, he bought out Power Computing's Mac OS license and made the operating system the exclusive property of Apple again. He brought a lot of culture back into Apple—the culture of creativity, innovation, and classy design that the company had thrived on in its early days. Huge Apple billboards, containing the simple message “Think Different” were soon visible across the United States announcing it to the world at large that Apple was back.

## 1.4 “We’re Profitable”

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Jobs appeared onstage at Macworld, 1998 and gave his traditional lengthy but absorbing speech. At the very end, pretending he had finished but then returning to the microphone, he added as if just a footnote, “I almost forgot. We’re profitable.” The crowd cheered the announcement and loved Steve Jobs, the saviour of Apple. But the fact was slightly different. Almost the entire credit for the turnaround in Apple’s fate was deserved by Gil Amelio. But he was already forgotten and Jobs was once again basking in someone else’s glory.

Championed by Jobs, Apple launched the first iMac on May 6, 1998. By integrating the monitor into the same box as all the circuits, modems and plugs, he had gone back to the days of the early Macintosh and created a consumer-computing appliance in one unit. Open the box, plug it in, and get started. The iMac was the first computer that shipped with a CD-ROM instead of a floppy drive. It was instrumental in driving the old and practically useless floppy drive technology out of the market and bringing in the newer, more advanced technology of compact discs. The iMac took off in the market and started raking in healthy profits for Apple.

Jobs also chopped off the Newton from the company’s line-up, just when the product had started bringing in some profits and had been proven to be the most advanced PDA in the market. It is



alleged that was not a product brought into the market under his leadership and therefore, he saw no reason to let it continue. Even after eight years of absolutely no support from Apple, there are several Newtons still in use around the world. There is a Newton club that serves as a common place for Newton owners to get support for their device. Efforts are being made to port the Newton operating system to other PDA hardware to give it a new lease of life, and they are on the verge of bearing fruit.

# All about the iPod



**T**he iPod has become synonymous with “portable music player.” From the year 2001, when Apple introduced the first iPod, it has revolutionised the entire portable music industry. With more than a 73 per cent market share, the iPod has left its competition far behind. Why aren’t better, more feature-rich players grabbing the market? What makes the iPod so special?

## 2.1 The Origins Of The iPod

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Until 2001, the portable music player market was in its infancy. Small-capacity players, clunky and primitive interfaces, poor battery life. Then in October 2001, Apple introduced the iPod. This player boasted of 1000 CD-quality songs packed into an ultra-portable device that fit comfortably inside a pocket. The first iPod had a 5 GB hard drive, 10 hours of music playback, and a 160 x 128 pixel display. But it



The 1st Generation iPod—notice the lack of the clickwheel

was not these features that set the iPod apart from other players. It was that the iPod introduced the click-wheel, a scroll-wheel to thumb through the music collection. The iPod also came with the FireWire interface, which was much faster than the USB 1.1 speeds available to most other music players.

The iPod caught on mainly because it was easy to use, which was facilitated by its easy syncing capabilities with iTunes. Just plug the iPod in, and the library was automatically synced via FireWire. The first generation iPod was a Mac only device.

### 2.1.1 Second, Third, Fourth, Fifth

The second-generation iPod was more of an upgrade to the first generation. Introduced in March 2002, it offered 10 GB of disk space and also offered storing of contacts information inside the iPod. The iPod was still a Mac only device.

Then Apple introduced iTunes for Windows—a giant leap for Apple as it expanded its customer base. This release also meant the release of the third-generation iPod, in September 2003, with a giant leap in hard drive capacity with 20 GB / 40 GB models. The new iPod also had a facelift, was thinner, smaller and the control

buttons moved upwards while introducing a solid non-moving click-wheel as seen in today's iPods. It also came with USB 2.0 support for compatibility with the PC.

In January 2004, the iPod mini was introduced. It was the smallest portable music player ever to hold up to 1,000 songs. It was encased in an ultra-portable, lightweight anodised aluminium body and available in five colours. The mini also incorporated the touch-sensitive click-wheel as well as support for the PC.

October 2004, the fourth-generation iPod was introduced with a colour screen with photo display capabilities. iPod Photo created an entirely new iPod experience in full colour for viewing album artwork, calendars, contacts, and games. The click-wheel now integrated the playback control buttons within its boundaries, giving it a much more minimalistic look.

The fifth-generation iPod, announced in October 2005, introduced video playback along with a gorgeous black version moving away from Apple's trademark white. This iPod was super-slim, had up to 60 GB of storage capacity, and 20 hours of music playback. The larger 2.5-inch screen displayed 320 x 240 videos with a limited two hours of video playback time. This coincided with Apple's announcement of television show and music video downloads at the iTunes Music Store.

At around the same time, it also introduced the iPod nano, a razor-thin iPod. The nano incorporated Flash-based storage, and was available in 2 GB / 4 GB variants of black / white. It featured the click wheel as well as a 1.5-inch colour display with support for photos.

The shuffle was introduced in January 2005, to cash in on the Flash-drive-based music players. Smaller than a pack of gum, the shuffle integrated with iTunes and updated its tracks using the Autofill feature. The shuffle was available in 512 MB and 1 GB variants.

In September 2006, Apple updated its iPod, dubbed 5.5Gen, to a brighter screen as well as upping its battery life to a more acceptable six hours of video playback. This coincided with Apple's announcement of movie downloads at the iTunes Store. Apple also introduced the iPod nano second generation, encased in colours and upping the battery life to above 25 hours.

Apple also introduced the iPod shuffle second-gen, which was claimed to be the smallest portable music player. Super-small with a single 1 GB model, the iPod shuffle 2G is just half a cubic inch in volume and boasts 12 hours of battery life.

## 2.2 iPod Models

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The current iPod line-up includes the iPod Video, the iPod nano, and the iPod shuffle.

### 2.2.1 iPod Video

The big daddy of iPods, the iPod video or just the iPod, has been one of Apple's greatest success stories. The salient features of this iteration include the 2.5-inch colour display, 30 GB / 80 GB capacity to hold around 20,000 songs or 100 hours of video. It can play music, photos, games and also integrates a search feature to easily find songs. A battery life of six hours of video and 16 hours for music is more than expected of such a small device.



The U2 edition  
iPod Video

The iPod may not be the most feature-rich of portable media players in the market, but it is the simplest to use. One of the main reasons for the iPod's simplicity is iTunes. Setting up and managing music in iTunes and transferring it to the iPod can be handled by almost anyone.

Competition: Microsoft recently launched the Zune, slated as the newest iPod killer. It has a nice interface and boasts of Wi-Fi

capabilities, but it is troublesome to manage, and the Wi-Fi is way crippled. The result? The iPod still holds the #1 position at Amazon.com, leaving the Zune trailing far behind.

### 2.2.2 iPod nano

Measuring just .26 inches thin and 3.5 inches tall, the iPod nano is the sleekest music player out there. Sporting a 1.5-inch colour screen and the click-wheel, this iPod has taken the world by storm. Right below its two elder siblings, the iPod nano stands third in line at the top sellers list on Amazon.com.



The iPod Nano sets the standard for flash-based PMPs

The nano's quality lies in its thin aluminium body. It is much easier to pocket than the iPod video. The nano also has Flash-based storage, which means no moving parts, so it becomes perfect for jogging and other activities that would damage a hard drive. But just because it is small doesn't mean it lacks in features. The nano can play music just as well as the iPod video, can display photos, games, contacts, calendars—everything but play video.

The battery life gives real-world performance of more than 22 hours, playing music. Coming in six colours—red, pink, green, blue, silver and black—the capacities range from 2 GB to 8 GB.

Competition: SanDisk has its Sansa, which is quite popular. Spiffy interface, large capacities matching the nano's 8 GB, but the nano holds its own at all the major shopping sites.

### 2.2.3 iPod shuffle

The iPod shuffle has been called “the most wearable music player,” and rightly so. The shuffle, weighing in at 1 GB, is the smallest music player in the world. It has no display, no click wheel—just five control buttons on the front.

The shuffle is just 1.6 inches long and has a clip that makes it attachable to anything that it can get its clamp on. Giving real-world battery life of 11 hours, the little shuffle sounds just as good as the other iPods.

The competition: Almost none. There is the mobiBlu which is a 1-inch cube, but the 1.6-inch shuffle wins when volumes are compared. And while the shuffle lacks a display, it wins over when it comes to aesthetics and general ease of use.



The new iPod Shuffle

## 2.3 iPod Accessories

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The iPod does not lack in accessories. The sheer number of devices that sport the “made for iPod” logo cannot be summed up in any small list—ranging from speaker systems to some of the wackiest gadgets that can’t even be categorised!

### 2.3.1 Speaker systems

From among these, the most popular iPod accessories seem to be a dock speaker system for playing music directly from the iPod’s data port. Most of them can directly control the iPod by connecting through the data port as well as output video to an external display in case of the iPod video.

### 2.3.2 Altec Lansing inMotion iM5

Altec Lansing is known for its quality audio systems and their lineup of iPod speakers is one of the most portable and affordable around. Simply plug in any iPod models and use the dock’s control’s to access music. It comes with a handy remote and even charges your iPod.



The Altec Lansing iM7

### 2.3.3 Bose SoundDock (Rs 17,990)

Bose is known for its quality but there's a premium attached to that quality. But even with that premium, the SoundDock remains one of the most popular speaker systems for the iPod.



The Bose SoundDock—for elite iPodders

### 2.3.4 iPod HiFi (Rs 26,200)

Apple's own speaker system produces some good acoustics albeit at a very high price. It comes with a remote, charges the iPod, and can be run on batteries which, along with the side handles makes this very portable.



Apple's own iPod HiFi

### 2.3.5 Headphones

#### 2.3.5.1 Sony MDR-G74SL headphones (\$25)

These street-style headphones use a behind-the-neck design featuring 30mm drivers to deliver some good quality sound but smaller than regular headphones.



Sony MDR-G74SL headphones

#### 2.3.5.2 Sennheiser PX 200 (\$60)

From a company that produces some high-end audio equipment, these headphones don't disappoint. However, make sure the ear cup seals properly against the bumps of the ear failing which it could reduce the bass.



The Sennheiser PX 200

#### 2.3.5.3 Shure E3c (\$179)

Cheaper than most active noise isolation earphones, these canal-phones sport really great sound.



Shure's E3c

### 2.3.6 Cool, funky, and crazy!

#### Money Music

Here's an iPod add-on you can take to the bank—literally.



Available in four colours, this leather wallet carries the iPod nano, and has space for cash and credit cards.

### Levi's iPod Jeans

With controls built right into the fabric, there's a big red cable sticking out of the jeans to connect your iPod to, and loads and loads of pockets to hold all your iPod accessories.



Levi's iPod jeans include a special 'Pod pocket

### G-Tech Messenger Bag

Connect your iPod inside a pocket on the bag and you can use the Smart Fabric buttons on the strap to control your audio. Great for using your iPod without having to remove it from the bag.



### iPod Car Stereo

Available in most 2007 Ford, GM, and Mazda vehicles and many other high-tech vehicles. Integration with the iPod has become a fashion statement for vehicle manufacturers.

## 2.4 iPod Hacks

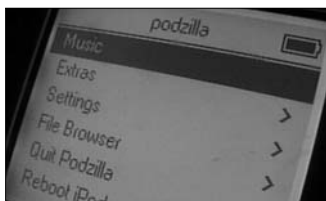
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When you need something from your iPod which is not possible with the standard tools provided by Apple, what do you do? Hack it! Yes, the iPod is basically an external hard disk with its own operating system stored in one partition.

### 2.4.1 LinuxPod

The current most popular hack is installing Linux on your iPod. Why would you want to run Linux on your iPod? Because you can use your iPod for a variety of other functions otherwise not possible with the regular OS. The install program called Podzilla is a barebones flavour of Linux with a GUI that runs on the iPod's tiny screen.

With Podzilla running on the iPod, one can get the age-old PC game *Doom* to run on the iPod. The game runs at an average 15 fps, but is still fun.



iPod Linux

### 2.4.2 iPod video without video

A constant question iPod fans seem to ask is, when will it support video. Well, it already does. Sort of. Once you've installed iPodLinux, you're just a few quick steps away from playing uncompressed video on your iPod.

The trickiest part of this hack, assuming you already have Podzilla installed, is uncompressing the video. Currently, this hack only works with uncompressed 24-bit AVI video that has been converted into iPod-accessible files using another small application found on the same page. The commands are different for colour iPods, minis, and greyscale models, and although they are command-line functions, users should be able to copy and paste the commands with just a slight bit of tweaking to include file names.

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# Macintosh Computers



**“T**o create a new standard, it takes something that’s not just a little bit different; it takes something that’s really new and really captures people’s imagination—and the Macintosh, of all the machines I’ve ever seen, is the only one that meets that standard.”

-Bill Gates; Chairman, Microsoft.

At a conference on the Macintosh (1984)

These words by the world’s richest man and more importantly the Chairman of Microsoft sum up the standards set by Macintosh computers quite beautifully.

From the early 1980s, Apple has been known to be an innovator. The company has introduced several products since its inception; products that have been at the forefront of design and performance. However, Apple *has* been guilty of pricing their products too high. This has meant that computers from Apple have stayed out of the reach of many. Also, Apple has made several grave mistakes in this period, including limiting their product line to a few highly-priced desktops and laptops.

However, in the last few years, Apple has rapidly expanded its line of computers. The company has made a conscious effort to meet the demands of the low cost market with the Macbook and the Mac Mini. However, the cheapest computers from Apple continue to be more expensive than the cheapest computers from Dell, Acer, HP, and other computer manufacturers. This is an area that needs to be looked into by Apple, as they cannot hope to increase their market share without selling computers cheaper than their competitors.

To their credit, Apple have indeed tried to make computers simpler for the common man, but the high price tag has meant that the same common man cannot derive the benefits of these products, simply because they're out of his budget! Whether Apple adopts a different pricing strategy in future remains a question that only one company can answer.

In this chapter, we present to you the entire range of Apple computers.

## 3.1 Mac Pro

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Apple called it the Fastest Mac Ever. ZDNet gave it 8 on 10 in its review. This quad-core performance beast is one of Apple's two prosumer (professional consumer) computers. It's called the Mac Pro.

The Mac Pro was first introduced by Apple in 1994 as the Power Mac. The Power Mac served both the Mac enthusiast and

the graphics professional equally well for more than a decade. In 2006, after Apple decided to switch to Intel processors, the Power Mac was finally given the rest that was long due. It was re-christened the Mac Pro, and this ended the era of PowerPC computers from Apple. As the last Power Macs shipped from Apple factories, along with them shipped the Mac Pro, the new, more powerful professional computer from Apple. It's like how a former champion passes the baton to the new one. It's like how Pete Sampras passed the baton to Roger Federer; it's like how Sunil Gavaskar passed the baton to Sachin Tendulkar.



The beast that is Mac Pro

As we said earlier, the Mac Pro is a performance beast. It uses two 64-bit dual core Intel Xeon Woodcrest processors. The two dual-core processors make for a total of four processing cores. You can choose from among the 2 GHz, 2.66 GHz, or 3 GHz models. Simply put, it means a lot of power!

However, power doesn't come cheap. The price of the customised 2.66 GHz Mac Pro in India is Rs 1,63,700 approx. You can configure it to bring the price down considerably. For example, you can downgrade the processor to 2 GHz, which will result in a significant drop in price. Also, you can always push the dealer to get an even better deal.

The target market for the Mac Pro is graphics professionals, video editors, and others from the audio / video / graphics industry. We wouldn't recommend buying the Mac Pro for home use, as the iMac is more suitable and customised for home use.

You can visit [www.apple.com/macpro/](http://www.apple.com/macpro/) for more details on the Mac Pro and [www.asia.apple.com/store/india/Desktops/MacPro](http://www.asia.apple.com/store/india/Desktops/MacPro).

htm for information on pricing and dealer locations.

The following are the specifications of Mac Pro, which can be customised at Apple's Web site:

### Processing

- Two 2 GHz, 2.66 GHz, or 3 GHz dual-core Intel Xeon 5100 series processors
- Intel Core microarchitecture
- 4 MB shared L2 cache per processor
- 128-bit SSE3 vector engine
- 64-bit data paths and registers
- 1.33GHz, 64-bit dual independent frontside buses

### Memory

- 667 MHz DDR2 ECC fully-buffered DIMM (FB-DIMM) memory
- 8 FB-DIMM slots on two memory riser cards (4 slots per card) supporting up to 16 GB of main memory
- Up to 256-bit wide memory architecture

### Graphics and Displays

- Double-wide 16-lane PCI-Express graphics slot with one of the following graphics cards installed:
- NVIDIA GeForce 7300 GT with 256 MB of GDDR2 SDRAM, one single-link DVI port, and one dual-link DVI port
- ATI Radeon X1900 XT with 512 MB of GDDR3 SDRAM and two dual-link DVI ports
- NVIDIA Quadro FX 4500 with 512 MB of GDDR3 SDRAM, two dual-link DVI ports, and one stereo 3D port
- Multiple graphics card configurations including two, three, or four NVIDIA GeForce 7300 GT cards
- 300 W for up to four PCI-Express graphics cards
- Support for up to eight displays
- Support for digital resolutions up to 1920 x 1200; dual-link DVI ports support up to 2560 x 1600
- Support for analogue resolutions up to 2048 x 1536
- DVI to VGA Adapter included
- Dual-display support for extended desktop and video mirroring modes

### Storage

- 4 independent 3 Gb/s Serial ATA cable-free, direct attach hard

drive bays; four internal hard drive carriers included

- Up to 3TB of internal storage
- Hard drive bay 1
  - 160 GB Serial ATA 3 Gb/s, 7200 rpm, 8 MB cache
  - 250 GB Serial ATA 3 Gb/s, 7200 rpm, 8 MB cache
  - 500 GB Serial ATA 3 Gb/s, 7200-rpm, 8 MB cache
  - 750 GB Serial ATA 3 Gb/s, 7200 rpm, 16 MB cache

#### **Hard drive bay 2**

- 500 GB Serial ATA 3 Gb/s, 7200 rpm, 8MB cache
- 750 GB Serial ATA 3 Gb/s, 7200rpm, 16MB cache

#### **Hard drive bay 3**

- 500 GB Serial ATA 3 Gb/s, 7200 rpm, 8 MB cache
- 750 GB Serial ATA 3 Gb/s, 7200-rpm, 16 MB cache

#### **Hard drive bay 4**

- 500 GB Serial ATA 3 Gb/s, 7200 rpm, 8 MB cache
- 750 GB Serial ATA 3 Gb/s, 7200 rpm, 16 MB cache
- 16x SuperDrive with double-layer support (DVD+R DL/DVD±RW/CD-RW)
- Writes DVD-R discs at up to 16x speed
- Writes DVD+R DL discs at up to 6x speed
- Reads DVDs at up to 16x speed
- Writes CD-R and CD-RW discs at up to 24x speed
- Reads CDs at up to 32x speed

#### **Communications**

- Two independent 10/100/1000BASE-T Ethernet (RJ-45) interfaces with support for jumbo frames
- Optional AirPort Extreme wireless networking4
- Optional Bluetooth 2.0+Enhanced Data Rate (EDR) up to 3 Mbps
- Optional external Apple USB Modem (RJ-11)

#### **Peripherals and audio**

- Two FireWire 800 ports (one on front panel, one on back panel)
- Two FireWire 400 ports (one on front panel, one on back panel)
- Five USB 2.0 ports (two on front panel, three on back panel)
- Two USB 1.1 ports on included keyboard
- Front-panel headphone minijack and speaker

## 3.2 The iMac

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*“The iMac is next year’s computer for \$1,299, not last year’s computer for \$999.”*

- Steve Jobs, CEO, Apple

*“The best consumer desktop computer on the market.”*

- Walter Mossberg; Columnist, Wall Street Journal

The cornerstone of Apple’s desktop computers, the iMac needs no introduction. You would have seen it in movies, in advertisements, on the Internet. The iMac was first introduced in 1998, it has changed form factors as many as three times, but still remains the most popular Mac. Ever.

The launch of the iMac and the return of Steve Jobs were two events that revived Apple from the lows it sunk to in the late 1990s. Almost immediately after returning to Apple, Steve Jobs made sweeping changes to the computer line up at Apple. He replaced confusing model num-



bers and names with simple, iconic brand names. This has been Apple’s tradition since then: simple, easy to recognise products.

Having discontinued the Performa series of computers, Apple needed a computer in a similar price range, a computer that could be targeted at consumers. The iMac was truly a revolutionary product when it was launched. It combined the CPU and monitor in one enclosure, a designing marvel at that time.

The first iMacs were called “Bondi Blue” iMacs, as their body was made of translucent blue plastic. It was also the first computer to not have a floppy drive. Yes, Apple discarded the floppy drive on this computer as early as 1998!



If one revolutionary design wasn't enough, Apple decided it was time for another. Come 2002, and Apple introduced the first flat panel iMac, a computer whose design some people to date consider the best ever.

Then Apple decided there was room for another! The flashy, shiny iMac G4 gave way to a sleek, chic and stylish iMac G5 in 2004.

If this weren't enough, Apple decided to go one step further. In late 2005, Apple decided to incorporate a webcam on the iMac. This gave birth to the flurry of computers with integrated cameras that we see today.

At the MacWorld Expo in January of 2006, Apple made a monumental move. It decided it was time to bid farewell to the PowerPC processors on iMacs, it was time to bid adieu to a platform that saw Apple through thick and thin. Out went the G5 iMacs, and in came the Intel iMacs, jazzed up with powerful Intel Core Duo processors. In late 2006, Apple introduced Core 2 Duo iMacs with processor speeds ranging from 1.83 GHz to 2.16 GHz.

Currently, the iMac comes in four models: two with a 17-inch screen, one with a 20-inch screen, and one with a 24-inch screen. In India, the iMac range starts from Rs 62,900 for the 17-inch 1.83 GHz model and goes up to Rs 1,20,000 for the 24-inch 2.16 GHz model. Go to your nearest Mac dealer, and check out the iMac. You'll be left impressed! You can visit [www.apple.com/imac](http://www.apple.com/imac) for more details on the iMac and [www.asia.apple.com/store/india /TheAppleStore\\_iMac.htm](http://www.asia.apple.com/store/india/TheAppleStore_iMac.htm) for information on pricing and dealer locations.

### **The technical specifications of the iMac are as follows:**

#### **Processor and memory**

- 1.83 GHz, 2.0 GHz, 2.16 GHz or 2.33 GHz Intel Core 2 Duo processor
- 4 MB of shared L2 cache at full processor speed on iMac with 2.0 GHz, 2.16 GHz, or 2.33 GHz Intel Core 2 Duo processor

- 2 MB of shared L2 cache at full processor speed on iMac with 1.83 GHz Intel Core 2 Duo processor
- 667 MHz system bus
- 17-inch model with 1.83 GHz processor
- 512 MB (2 x 256 MB) of PC2-5300 (667 MHz) DDR2 memory
- Two SODIMM slots support up to 2GB
- 17-inch model with 2.0 GHz processor, 20-inch and 24-inch models
- 1 GB (2 x 512 MB) of PC2-5300 (667 MHz) DDR2 memory
- Two SODIMM slots support up to 3GB

## **Storage**

### **17-inch model**

- 160 GB Serial ATA 7200 rpm hard drive
- Optional 250 GB and 500 GB Serial ATA 7200 rpm hard drives on models with 2.0 GHz processors

### **20-inch model**

- 250 GB Serial ATA 7200 rpm hard drive (2)
- Optional 500 GB Serial ATA 7200 rpm hard drive

### **24-inch model**

- 250 GB Serial ATA 7200 rpm hard drive (2)
- Optional 500 or 750 GB Serial ATA 7200 rpm hard drive

## **Optical drive**

- 17-inch model with 1.83 GHz processor with slot-loading 24x combo drive (DVD-ROM/CD-RW)
- Reads DVDs at up to 8x speed
- Writes CD-R discs at up to 24x speed
- Writes CD-RW discs at up to 16x speed

### **Reads CDs at up to 24x speed**

- 17-inch model with 2.0 GHz processor, 20-inch model and 24-inch model with slot-loading 8x SuperDrive (DVD+R DL/DVD±RW/CD-RW)
- Writes DVD+R DL discs at up to 2.4x speed
- Writes DVD-R and DVD+R discs at up to 8x speed
- Writes DVD-RW and DVD+RW discs at up to 4x speed
- Reads DVDs at up to 8x speed
- Writes CD-R discs at up to 24x speed

- Writes CD-RW discs at up to 16x speed
- Reads CDs at up to 24x speed

### **Communications**

- Built-in 54 Mbps AirPort Extreme wireless networking (802.11g standard; 802.11n capable with optional 802.11n enabler)(3)
- Built-in Bluetooth 2.0+EDR (Enhanced Data Rate) module (1)
- Built-in 10/100/1000 BASE-T Gigabit Ethernet (RJ-45 connector)
- Works with 56K V.92 Apple USB Modem (sold separately)

### **Display**

- Built-in 17-inch (viewable), 20-inch (viewable), or 24-inch (viewable) widescreen TFT active-matrix liquid crystal display
- Millions of colours at all resolutions
- Typical brightness: 250 cd/m (17-inch model); 280 cd/m (20-inch model); 400 cd/m (24-inch model)
- Typical contrast ratio: 500:1 (17-inch model); 800:1 (20-inch model); 700:1 (24-inch model)

### **Graphics and video**

#### **17-inch model with 1.83GHz processor**

- Intel GMA 950 graphics processor with 64MB of DDR2 SDRAM shared with main memory
- 17-inch model with 2.0GHz processor and 20-inch model
- ATI Radeon X1600 graphics processor using PCI Express
- 128 MB of GDDR3 SDRAM
- Optional 256 MB of GDDR3 SDRAM on 20-inch model

#### **24-inch model**

- NVIDIA GeForce 7300 GT graphics processor with 128 MB of GDDR3 SDRAM using PCI Express
- Optional NVIDIA GeForce 7600 GT graphics processor with 256 MB of GDDR3 SDRAM using PCI-Express

#### **Mini-DVI output port with support for DVI, VGA, S-video, and composite video connections via adapter**

- Built-in iSight camera
- Support for external display in extended desktop
- Digital resolutions up to 1920 x 1200
- Analogue resolutions up to 2048 x 1536

### 3.3 The Mac Mini

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Apple fans have come to expect nothing but the best from Cupertino, California. However, not even the most ardent of Mac enthusiasts would have believed that a 6.5-inch long, 6.5-inch wide, and 2-inch tall computer could be made possible. Apple did make it possible on January 11, 2005. They released the Mac Mini on that day.

The Mac Mini is the cheapest Macintosh in the entire line of Apple computers, and is aimed at first-time Windows switchers, students, families, and anyone else looking for a low-cost computing solution. What's more is that the Mac Mini weighs just 1.5 kg, so you can actually carry it around!

The Mac Mini was initially released in two models based on the PPC architecture. The user had a choice of two processors: a 1.25 GHz G4 or a 1.42 GHz G4. The 1.25 GHz G5 model was priced at \$499, and the 1.42 GHz model was priced at \$599.

The next significant change made to the Mac Mini was the addition of a third model: a 1.42 GHz G4 Mac Mini with a DVD-Writer called “SuperDrive” in Mac parlance. This model came at a price of \$699. This update in July 2005 also brought about an increase in the RAM of all Mac Mini models. From July onwards, all Mac Mini models came with 512 MB RAM as standard.

On 28th February 2006, Mac Mini bid adieu to the PPC architecture. At a special event, Steve Jobs launched the new Mac Mini models with Intel processors. There were two models launched: One was a 1.5 GHz Intel Core Solo Mac Mini with a combo drive and the other was a 1.66 GHz Intel



The tiffin box Mac

Core Duo Mac Mini with a SuperDrive (DVD-Writer in Mac parlance). The 1.5 GHz model was priced at \$599 and the 1.66 GHz model was priced at \$799.

In September 2006, Apple upgraded the Mac Mini models once again. The \$599 1.5 GHz Core Solo Model was replaced by a similarly-priced 1.66 GHz Core Duo model. The \$799 1.66 GHz Core Duo model was replaced by a 1.83 GHz Core Duo model. Till date, Apple sells the same models, which were released in September 2006.

In India, the Mac Mini range starts from Rs 35,500 for the 1.66 GHz Core Duo model to Rs 46,300 for the 1.83 GHz Core Duo model.

Visit [www.apple.com/macmini](http://www.apple.com/macmini) for more details on the Mac Mini and [www.asia.apple.com/store/india/macminin/newmacmini.htm](http://www.asia.apple.com/store/india/macminin/newmacmini.htm) for more information on pricing and dealer locations.

### **The technical specifications of Mac Mini are as follows.**

#### **Processor and memory**

- 1.66 GHz or 1.83 GHz Intel Core Duo processor
- 2 MB on-chip L2 cache
- 667 MHz frontside bus
- 512 MB of 667 MHz DDR2 SDRAM (PC2-5300) on two SO-DIMMs; supports up to 2 GB

#### **Size and weight**

- Height: 2 inches (5.08 cm)
- Width: 6.5 inches (16.51 cm)
- Depth: 6.5 inches (16.51 cm)
- Weight: 2.9 pounds (1.31 kg)

#### **Graphics and Video Support**

- Intel GMA 950 graphics processor with 64 MB of DDR2 SDRAM shared with main memory (1)
- DVI video output to support digital resolutions up to 1920 x 1200; supports 20-inch Apple Cinema Display and 23-inch Apple Cinema HD Display; supports coherent digital displays up to 154 MHz; supports non-coherent digital displays up to 135 MHz
- VGA video output (using included adapter) to support analogue resolutions up to 1920 x 1080 pixels

- S-video and composite video output to connect directly to a TV or projector (using Apple DVI to Video Adapter, sold separately)

### Communications

- Inbuilt 10/100/1000BASE-T Gigabit Ethernet (RJ-45 connector)
- Inbuilt 54 Mbps AirPort Extreme wireless networking (based on the 802.11g standard)
- Inbuilt Bluetooth 2.0 + Enhanced Data Rate (EDR) up to 3 Mbps
- Optional external Apple USB Modem

### Audio

#### Inbuilt speaker

- Combined optical digital audio input/audio line in (minijack)
- Combined optical digital audio output/headphone out (mini-jack)

### Storage

- 60 GB or 80 GB 5400 rpm Serial ATA hard disk drive; optional 120 GB or 160 GB drive
- One of the following optical drives:
- Slot-loading combo drive (DVD-ROM/CD-RW): reads DVDs at up to 8x speed, writes CD-R discs at up to 24x speed, writes CD-RW discs at up to 16x speed, reads CDs at up to 24x speed
- Slot-loading SuperDrive with double-layer support (DVD+R DL/DVD±RW/CD-RW): writes DVD+R DL discs at up to 2.4x speed, writes DVD-R and DVD+R discs at up to 8x speed, writes DVD-RW and DVD+RW discs at up to 4x speed, reads DVDs at up to 8x speed, writes CD-R discs at up to 24x speed, writes CD-RW discs at up to 16x speed, reads CDs at up to 24x speed

## 3.4 The MacBook Pro

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Like the Mac Pro, Apple's premier notebook, the MacBook Pro has a rich history that stretches for more a decade. The MacBook Pro was first launched in 1991 as the Powerbook 100! Like its predecessors, the first PowerBooks were revolutionary in their design. The use of dark grey cases and trackballs in an era when computer design wasn't the exact focus of companies was indeed revolutionary. They looked a generation apart from other computers.

Believe it or not, Apple was responsible for all the small and thin laptops that you see around! In 1992, Apple launched the PowerBook Duo, which was a thin and lightweight laptop with minimal features.

The early PowerBook models captured the laptop market by storm. At that time, these laptops had a market share of 40 per cent!

The next significant update to the PowerBook line up was the PowerBook 500 series that was launched in 1994. Apple brought some revolutionary new features to this series as well. This series was the first to feature built-in Ethernet and the first to use trackpads.

In 1995, Apple switched the Powerbook to PowerPC processors from the Motorola 68k line of processors. The first laptop launched with the PowerPC processors was the Powerbook 5300. The Powerbook 5300 series is considered by many to be the worst ever released by Apple, as laptops in this series were ridden with lots of problems ranging from reliability issues to safety hazards.

The next big update to the Powerbook line came in 1998, with the launch of the G3 Powerbooks. The line of laptops featured a design with dynamic curves and a stylish black case.

In 2001, Steve Jobs launched the G4 Powerbooks with a titanium body and widescreen viewing pleasure, and is considered by many to be the finest computer designed ever. Apple billed it as “The First Supercomputer that you can carry on a plane!” This is the time that Apple laptops made inroads into the creative industry, as these laptops gave good performance with low power consumption, largely because of the nature of the PowerPC processors.



The suave MacBook Pro

In January 2006, Apple discon-

tinued the Powerbook range. The notebook that served the Mac faithful was gone. Out went the Powerbooks, in came the MacBook Pros!

Currently, the MacBook Pro comes in three models: A 15-inch 2.16 GHz Core 2 Duo, A 15-inch 2.33 GHz Core 2 Duo, and a 17-inch 2.33 GHz Core 2 Duo. The 15-inch model's screen supports a resolution of 1440 x 900, and the 17-inch model's screen supports a maximum resolution of 1680 x 1050.

In India, the MacBook Pro range starts at Rs 1,15,800 for the 15-inch 2.16 GHz model to Rs 1,56,800 for the 17-inch 2.33 GHz model.

Like the Mac Pro, the target market for the MacBook Pro is graphics professionals, video editors and others from the audio/ video / graphics industry. We wouldn't recommend buying the MacBook Pro for home use, as the MacBook is more suitable for home use.

You can visit [www.apple.com/macbookpro](http://www.apple.com/macbookpro) for more details on the MacBook Pro and [www.asia.apple.com/store/india/MacBookPro.htm](http://www.asia.apple.com/store/india/MacBookPro.htm) for more information on pricing and dealer locations. The technical specifications of the MacBook Pro are as follows:

## **Processor and memory**

### **15-inch MacBook Pro**

- 2.16 GHz or 2.33 GHz Intel Core 2 Duo processor, 4 MB on-chip shared L2 cache running 1:1 with processor speed
- 1 GB (single SO-DIMM) of PC2-5300 (667 MHz) DDR2 memory on 2.16 GHz configuration; and 2 GB (two SO-DIMMs) on 2.33 GHz configuration; two SO-DIMM slots support up to 3 GB
- 667 MHz frontside bus

### **17-inch MacBook Pro**

- 2.33 GHz Intel Core 2 Duo processor, 4 MB on-chip shared L2 cache running 1:1 with processor speed
- 2 GB (two SO-DIMMs) of PC2-5300 (667 MHz) DDR2 memory; two SO-DIMM slots support up to 3 GB
- 667 MHz frontside bus



## Expansion

- One FireWire 400 port at up to 400 Mbps
- One FireWire 800 port at up to 800 Mbps
- 15-inch MacBook Pro
- Two 480 Mbps USB 2.0 ports

### 17-inch MacBook Pro

#### Three 480 Mbps USB 2.0 ports

- ExpressCard/34 slot

## Battery and power

### 15-inch MacBook Pro

- 60-watt-hour lithium-polymer battery (with integrated charge indicator LEDs) providing up to 5 hours of battery life

### 17-inch MacBook Pro

- 68-watt-hour lithium-polymer battery (with integrated charge indicator LEDs) providing up to 5.5 hours of battery life
- 85W MagSafe Power Adapter with cable management system
- MagSafe power adapter port

## Communications

- Inbuilt 54 Mbps AirPort Extreme wireless networking (802.11g standard; 802.11n capable with optional 802.11n enabler) (2)
- Inbuilt Bluetooth 2.0+EDR (Enhanced Data Rate)
- Inbuilt 10/100/1000BASE-T Gigabit Ethernet (RJ-45 connector)

## Audio

- Combined optical digital input/audio line in (minijack)
- Combined optical digital output/headphone out (minijack)
- Built-in stereo speakers
- Internal omnidirectional microphone (located under left speaker grille)

## Display

### 15-inch MacBook Pro

- 15.4-inch (diagonal) TFT display, support for millions of colours; optional glossy widescreen display
- Supported resolutions: 1440 x 900 (native), 1280 x 800, 1152 x 720, 1024 x 640, and 800 x 500 at 16:10 aspect ratio; 1024 x 768, 800 x 600, and 640 x 480 at 4:3 aspect ratio; 1024 x 768, 800 x 600, and 640 x 480 at 4:3 aspect ratio stretched; 720 x 480 at 3:2 aspect ratio, 720 x 480 at 3:2 aspect ratio stretched

## 17-inch MacBook Pro

- 17-inch (diagonal) TFT display, support for millions of colours; optional glossy widescreen display
- Supported resolutions: 1680 x 1050 (native), 1280 x 800, 1152 x 720, 1024 x 640, and 800 x 500 at 16:10 aspect ratio; 1280 x 1024 at 5:4 aspect ratio; 1280 x 1024 at 5:4 aspect ratio stretched; 1024 x 768, 800 x 600, and 640 x 480 at 4:3 aspect ratio; 1024 x 768, 800 x 600, and 640 x 480 at 4:3 aspect ratio stretched; 720 x 480 at 3:2 aspect ratio; 720 x 480 at 3:2 aspect ratio stretched

## Video and graphics support

### 15-inch MacBook Pro

- ATI Mobility Radeon X1600 graphics processor, dual-link DVI support, 128 MB of GDDR3 SDRAM on 2.16 GHz configuration; 256 MB of GDDR3 SDRAM on 2.33 GHz configuration

### 17-inch MacBook Pro

- ATI Mobility Radeon X1600 graphics processor, dual-link DVI support, 256 MB of GDDR3 SDRAM
- Dual display and video mirroring: Simultaneously supports full native resolution on the built-in display and up to 2560 x 1600 pixels on an external display, both at millions of colours
- DVI output port
- VGA output using included DVI to VGA adapter
- Built-in iSight camera

## Storage

### 15-inch MacBook Pro

- 120 GB 5400 rpm Serial ATA hard drive. Optional 160 GB 5400 rpm, 200 GB 4200 rpm drives (3).
- 6x slot-loading SuperDrive (DVD+R DL/DVD±RW/CD-RW)
- Maximum write: 6x DVD-R and DVD+R; 4x DVD+RW and DVD-RW; 2.4x DVD+R DL (double layer); 24x CD-R; 10x CD-RW
- Maximum read: 8x DVD-ROM, DVD-R, DVD+R; 6x DVD-ROM (double layer DVD-9), DVD+RW, DVD-RW; 4x DVD+R DL (double layer); 24x CD

### 17-inch MacBook Pro

- 160 GB 5400 rpm Serial ATA hard drive. Optional 100 GB 7200 rpm, 200 GB 4200 rpm drives (3).
- 8x slot-loading SuperDrive (DVD+R DL/DVD±RW/CD-RW)

- Maximum write: 8x DVD-R, DVD+R, and DVD+RW; 6x DVD-RW; 4x DVD+R DL (double layer), 24x CD-R; 16x CD-RW
- Maximum read: 8x DVD-ROM; 6x DVD-ROM (double layer DVD-9), DVD-R, DVD-RW, DVD+R and DVD+RW, DVD+R DL (double layer); 24x CD

### Input

- Built-in full-size keyboard with 78 (U.S.) or 79 (ISO) keys, including 12 function keys, 4 arrow keys (inverted “T” arrangement), and embedded numeric keypad
- Backlit keyboard with ambient light sensors for automatic adjustment of keyboard illumination and screen brightness
- Solid-state scrolling trackpad for precise cursor control; supports two-finger scrolling, tap, double-tap, and drag capabilities
- Apple Remote

## 3.5 The MacBook

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Like its elder sibling, the MacBook has a rich history as well. The Macbook was first introduced as iBook in 1999. The iBook served Macintosh users for about seven years before Apple switched to Intel processors, and replaced iBook with MacBook.

As we’ve said before, the iBook was first introduced in 1999. The target market of the iBook G3 was students, families, and other individuals who needed a lower-priced notebook, without the frills of the Powerbook. At that time, Apple’s computer line sorely missed a laptop targeted at consumers. The Powerbook was a fine bit of machinery, but it was way too expensive for home users. Apple recognized this hole in their laptop line-up, and on 21st July 1999, Steve Jobs introduced the iBook G3 at the MacWorld conference.

The design of the iBook G3 was influenced by the iMac of those days. The iBook G3 was also the first mainstream computer to feature inbuilt wireless networking.

By the early 2000s, the iBook design had gotten a bit dated.

Translucent blue plastic came to be associated with the computers of the 90s. Sensing this, Apple introduced a new generation of iBooks, completely re-designed with sleeker corners, fewer colours (in fact, just one colour: white). This update separated the prosumer and consumer line of Apple products: The consumer line came in white, while the prosumer line came in an anodised aluminium finish.

In 2003, Apple upgraded the iBook again. This time the update brought in G4 processors, translucent body, an even sleeker design, and better displays. This update marked the end of the use of G3 processors by Apple. Apple continued to revise the iBook with processor updates, RAM upgrades, and other such features. Finally, in May 2006, Apple discontinued the iBook, marking the end of a computer that truly revolutionised the way computers are designed. Out went the iBook, in came the MacBook.

The MacBook was introduced with a slight change in design, but a huge change in the architecture. It became the first Mac consumer notebook to be powered by the Intel Core Duo processors. The first Macbook came in three models: one 1.83 GHz Core Duo Model and two 2.0 GHz Core Duo models equipped with SuperDrives.



The chic MacBook

The Macbook was further revised in late 2006 with Intel Core 2 Duo processors. However, there has been no update to the MacBook line since then.

The MacBook line currently comes in three models: One 1.83 GHz Core 2 Duo model, one 2.0 GHz Core 2 Duo model and one 2.0 GHz Core 2 Duo model that comes in black.

In India, the MacBook range starts from Rs 66,900 for the 1.83 GHz model and goes up to Rs 87,600 for the 2.0 GHz model.

You can visit [www.apple.com/macbook](http://www.apple.com/macbook) for more details on the MacBook and [www.asia.apple.com/store/india/MacBook.htm](http://www.asia.apple.com/store/india/MacBook.htm) for information on pricing and dealer locations. The technical specifications of the MacBook are:

### **Processor and memory**

- 1.83 GHz or 2.0 GHz Intel Core 2 Duo processor
- 4 MB of shared L2 cache running at full processor speed on MacBook with 2.0 GHz Intel Core 2 Duo processor
- 2 MB of shared L2 cache running at full processor speed on MacBook with 1.83 GHz Intel Core 2 Duo processor
- 667 MHz frontside bus
- 667 MHz DDR2 SDRAM (PC2-5300; two SO-DIMM slots support up to 2 GB
- 1 GB (two 512 MB SO-DIMMs) in 2.0 GHz models
- 512 MB (two 256 MB SO-DIMMs) in 1.83 GHz model

### **Storage**

- 60 GB, 80 GB, or 120 GB 5400 rpm Serial ATA hard disk drive; optional 80 GB, 120 GB, or 160 GB 5400 rpm; or 200 GB 4200 rpm drive (1)

### **One of the following optical drives:**

#### **24x slot-loading Combo drive (DVD-ROM/CD-RW)**

- Reads DVDs at up to 8x speed
- Writes CD-R discs at up to 24x speed
- Writes CD-RW discs at up to 16x speed
- Reads CDs at up to 24x speed

#### **6x slot-loading SuperDrive (DVD+R DL/DVD±RW/CD-RW)**

- Writes DVD+R DL (double layer) discs at up to 2.4x speed
- Writes DVD-R and DVD+R discs at up to 6x speed
- Writes DVD-RW and DVD+RW discs at up to 4x speed
- Reads DVDs at up to 8x speed
- Writes CD-R discs at up to 24x speed
- Writes CD-RW discs at up to 10x speed
- Reads CDs at up to 24x speed

## Display

- 13.3-inch (diagonal) glossy widescreen. TFT display with support for millions of colours
- Supported resolutions: 1280 x 800 (native), 1152 x 720, 1024 x 768, 1024 x 640, 800 x 600, 800 x 500, 720 x 480, and 640 x 480 at 16:10 aspect ratio; 1024 x 768, 800 x 600, and 640 x 480 pixels at 4:3 aspect ratio; 720 x 480 at 3:2 aspect ratio

## Graphics and video support

- Intel GMA 950 graphics processor with 64 MB of DDR2 SDRAM shared with main memory (3)
- Extended desktop and video mirroring: simultaneously supports full native resolution on the built-in display and up to 1920 x 1200 pixels on an external display, both at millions of colours
- Inbuilt iSight camera
- Mini-DVI port
- DVI output using mini-DVI to DVI adapter (sold separately)
- VGA output using mini-DVI to VGA adapter (sold separately)
- Composite and S-video output using mini-DVI to video adapter (sold separately)

## Communications

- Inbuilt 10/100/1000BASE-T Gigabit Ethernet (RJ-45 connector)
- Inbuilt 54 Mbps AirPort Extreme wireless networking (802.11g standard; 802.11n capable with optional 802.11n enabler)
- Inbuilt Bluetooth 2.0 + Enhanced Data Rate (EDR)
- Optional external Apple USB Modem

## Audio

- Inbuilt stereo speakers
- Inbuilt omnidirectional microphone
- Combined optical digital audio input/audio line in (minijack)
- Combined optical digital audio output/headphone out (mini-jack)

## 3.6 Mac Accessories

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### 3.6.1 Mighty Mouse

With the introduction of the Mighty Mouse in 2005, Apple created a bit of history. You may ask what's new about a USB mouse. What was new was that the Mighty Mouse was the first multi-button mouse ever sold by Apple. Previously, Apple used to sell the single button Apple Pro mouse. However, with the introduction of the white, clean, multi-touch, multi-button Mighty Mouse, Apple finally shifted to two-button mice.

Like other Apple products, the design of the Mighty Mouse is very innovative in the sense that it has no visible buttons on top! The touch-sensitive top shell detects right and left clicks with a great deal of accuracy. The Mighty Mouse is made of white plastic, with the Apple logo engraved on top of it.



The mightiest mouse ever!

However, unlike the now-discontinued Apple Pro Mouse, the Mighty Mouse does not have a transparent top shell. The Mighty Mouse currently comes in two models: A USB-linked model and a Bluetooth-wireless model.

The USB model uses optical technology to detect movement, while the Bluetooth wireless model uses laser technology. As the gamers will tell you, mice powered by laser technology are much more accurate than mice powered by optical technology.

In India, the USB-linked Mighty Mouse retails at Rs 2,700 while the Wireless Mighty Mouse retails at Rs 4,000. The Mighty mouse works with both Mac OS X and Windows (upwards of Windows 2000). However, the 360-degree scrolling function of the Mighty Mouse is currently not supported on Windows.

### 3.6.2 Apple Cinema Displays

The Apple Cinema displays, like the Mac Pro and the MacBook Pro, are aimed at professional users, otherwise called prosumers.

The Apple Web site says this about the Apple Cinema Displays:

*“An Apple Cinema Display is the perfect companion for your new Mac Pro or MacBook Pro. Of course, two Apple displays would be even better. Featuring a sleek anodized aluminium case, one display can sit close to the next—for an almost seamless picture. Connect your displays via industry-standard DVI and choose an optional VESA mount to install them anywhere.”*

The Apple Cinema Displays currently come in three models: A 20-inch Apple Cinema Display, a 23-inch HD Display and a gigantic 30-inch display. However, the Apple cinema displays are quite expensive. The 20-inch



Two 30-inch Apple Cinema Displays!

model costs \$699—approximately Rs 31,500; the 23-inch model costs \$999—approximately Rs 45,000; and the 30-inch model costs (hold your breath!) a cool \$1,999 (approximately Rs 90,000).

One may feel that these displays are very expensive, especially considering the fact that displays sold by other computer companies come very cheap. However, the difference in cost lies in the use of different panels. C.hilding over at MacRumors Forums has given a detailed explanation on the difference in costs between the Apple Cinema Displays and other LCDs: <http://forums.macrumors.com/showthread.php?t=252327>

Visit [www.apple.com/displays](http://www.apple.com/displays) for more details on the Apple Cinema Displays and [www.apple.co.in](http://www.apple.co.in) for more information on



pricing and dealer locations. The technical specifications of the Apple Cinema Display are:

### **Size and weight**

#### **20-inch Apple Cinema Display**

- Height: 16.1 inches (41 cm)
- Width: 18.5 inches (47.1 cm)
- Depth: 6.8 inches (17.4 cm)
- Weight: 14.5 pounds (6.6 kg)

#### **23-inch Apple Cinema HD Display**

- Height: 17.7 inches (45 cm)
- Width: 21.1 inches (53.6 cm)
- Depth: 7.3 inches (18.7 cm)
- Weight: 15.5 pounds (7.03 kg)

#### **30-inch Apple Cinema HD Display**

- Height: 21.3 inches (54.3 cm)
- Width: 27.2 inches (68.8 cm)
- Depth: 8.46 inches (21.5 cm)
- Weight: 27.5 pounds (12.47 kg)

### **Agency approvals**

- FCC Part 15 Class B
- EN55022 Class B
- EN55024
- VCCI Class B
- AS/NZS 3548 Class B
- CNS 13438 Class B
- ICES-003 Class B
- ISO 13406 part 2
- MPR II
- IEC 60950
- UL 60950
- CSA 60950
- EN60950
- ENERGY STAR
- TCO 03

# iPhone



**F**ew products have generated the kind of hype that the iPhone has. While we in India must wait a painful year to get our hands on it, customers in the US will have already camped outside the iPhone stores by the time you read this. Even though it isn't with us yet, it can't hurt to see what's so great about it...

## 4.1 What Is The iPhone?

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“This is a day I’ve been looking forward to for two and a half years.” The sizeable crowd gathered at the Macworld Expo this January cheered with anticipation as the CEO of Apple, Steve Jobs, initiated what ended up being one of the most successful product announcements ever. The product was, of course, Apple’s first foray into the huge and extremely competitive cell phone market. “Today we are introducing three revolutionary products of this class. The first one is a widescreen iPod with touch controls, the second is a revolutionary mobile phone and the third is a breakthrough Internet communications device... These are not three separate devices, this is one device and we are calling it—iPhone. Today Apple is going to reinvent the phone!”



Fan-made iPhone designs

The rumour mills have been running wild ever since Apple stepped into the consumer electronics industry with the first iPod six years ago. Almost every Macworld after the launch of the iPod has seen a flurry of



activity on the internet with iPhone mock-ups by some talented (and other not so talented) Photoshoppers cropping up everywhere and every Apple rumour site going crazy with proposed specifications and features. This year, however, it became a huge wave unrivalled by anything that has preceded it. It seeped out of the world of Apple fanatics to the general news websites concerning technology. Almost everyday, there used to be an iPhone related story on the front page of digg. And all this for a device that Apple had not even hinted at. People had started expecting that Apple would not launch a phone just to shock the world.

Apple has a great culture of secrecy about anything they do. Therefore, even the slightest hint of any patent filings or leaks draws a lot of media attention. Apple used this as a leverage to throw the rumour-mongers off course. They filed several fake patents with imaginary features and fantastic diagrams. There was this diagram of an enclosure strongly resembling the iPod Mini and people all over the Internet were suddenly blaspheming the iPhone over its atrocious design. Then there was this patent for a screen that was described in such an outlandish way that it was difficult to imagine what it could actually be like. No one had expected the multi-touch screen, but it is quite clear now what that patent was for.

Fans of Apple have been lusting for a mobile phone for a long time and this time, they were really expecting Apple to deliver on their hopes. The Internet was suddenly flooded with Photoshopped images of what the iPhone would be like. It is quite fun to browse through some of these images. Phones of every conceivable shape, size and form emerged in these mock-ups. There were candybar phones, flip phones, sliders, swivel phones, wearable phones, and just plain weird, imaginary, fantasy devices. Some of these concepts were blatant rip-offs of existing design, with the Motorola RAZR phone showing up in various colours and an Apple logo very often.

Then came the shocker when Cisco released their new range of VoIP phones in December, 2006 that were branded “iPhones.”

They had the trademark reserved since more than five years. Apple fans and blogs all around the world were effectively shut up when they realised that even if Apple did release a phone, it wasn't going to be branded an iPhone.

There were controversial statements with some people hating the idea of

Apple calling their phone the iPhone, and others angered at the prospect of having to address Apple's rumoured phone with some other name. Alternative names were suggested by people all over the web such as iFone, MacMobile, TelePod, iMobile, PodPhone, iChat Mobile or even iMistake (clearly, this guy was not a huge fan of Apple)!



Cisco beat Apple to the iPhone brand, causing much confusion

If the news of Cisco owning the rights to the iPhone trademark was surprising for people, the announcement of Apple christening their new phone as the iPhone was a total shocker. Steve Jobs had the gall to stand in front of four thousand people and announce a product to the world with a name that was trademarked by another company! Speculation ran high again as people wondered that it wasn't quite possible that Jobs had made the decision without being absolutely certain that they'd win the trademark in some way. If they would have had to rename the phone to something else later and pay Cisco charges for damage, it would have been a humiliation for the company.

However, Apple has a history of choosing controversial names and getting away with them. The name Macintosh was similar to the name of a product of a music company, McIntosh. Apple should not have gotten the rights to the name because both were pronounced exactly the same, but Apple somehow got the trade-

mark for the name Macintosh and launched the computer with that name. The Apple name itself has cost Apple a lot of money over the years because it is the name of the record company of The Beatles, Apple Corp.—and they have constantly been suing Apple for the past thirty years over various issues. But Apple has now signed a final deal with The Beatles and won complete rights to the name.

So, it wasn't the most surprising thing that Apple was sued by Cisco but kept delaying the case to try and arrive at a settlement outside the court. Finally, on February 21, the news appeared that "Cisco and Apple Reach Agreement on iPhone Trademark". This is the news in its entirety from Apple's official Web site: "Cisco and Apple today announced that they have resolved their dispute involving the 'iPhone' trademark. Under the agreement, both companies are free to use the 'iPhone' trademark on their products throughout the world. Both companies acknowledge the trademark ownership rights that have been granted, and each side will dismiss any pending actions regarding the trademark. In addition, Cisco and Apple will explore opportunities for interoperability in the areas of security, and consumer and enterprise communications. Other terms of the agreement are confidential."

All said and done, what matters most is that the phone was launched and it is a wonderful product. The dimensions are 115 x 61 x 11.6 mm or 4.5 x 2.4 x 0.46 inches and it weighs in at 135 grams. The front is almost entirely occupied by the huge screen, with a tiny speaker above it and a "Home" button below it. It does not flip, slide, or swivel. There is no keyboard or even the number pad; it just has the screen and one large button below it. On the left side, it has a volume rocker and a ring / silent button. On the top, it has a



You can lock and unlock the touchscreen with a gesture

standard 3.5 mm headset jack, a tray for the SIM card, and the Sleep/Wake button. On the bottom, it has the speaker, microphone, and the standard 30-pin iPod dock connector. It charges and syncs through the included dock and is compatible with existing iPod docks and almost all third-party accessories available for the iPods. On the back, it has a 2MP camera on the top left corner and the bitten Apple logo.

## 4.2 Features

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The most prominent and noticeable feature of the iPhone is the huge touchscreen. At a size of 3.5 inches and a resolution of 320 x 480 at 160 ppi (pixels per inch), it is arguably the best display on a mobile phone in the market. And as if the cake wasn't delicious enough, the revolutionary Multi-Touch user interface is the frosty icing on it that really steals the show. Armed with features such as multi-finger gestures and the ability to ignore unintended touches, it eliminates the requirement of a stylus and allows the user to interface with the phone using just their fingers with dead-on accuracy. Steve Jobs wants you to believe that it "works like magic," but we'll have to wait and see how much truth there is to that.

The most prominent quality of the Multi-Touch screen is its ability to recognise more than one finger and gestures made with fingers. It can identify whether you are touching it with a single finger or two. So, while browsing a Web page, for example, you can click with a single finger to open a link and use two fingers to scroll around. The finger gestures functionality is somewhat similar to mouse gestures in the Opera Web browser. You flick your finger lightly over the screen in whichever direction you want it to scroll to and does that. It is an effortless and convenient way to scroll around on the screen. This also eliminates the need for a scroll bar, utilising the precious screen real estate for displaying the content. The most fantastic feature of the Multi-Touch interface is the pinch-and-zoom feature. Whenever you need to zoom in on anything on the screen, you simply hold the tips of your index

finger and thumb together, touch the screen and pull your fingers apart. To zoom out, you simply reverse the action. Not only is this a very cool feature, it also gives you a sense of actually touching your data. You really have to see this one to believe it!

The second great feature, which in our opinion is greater than the first one, is that iPhone runs OS X. The operating system that makes the Macintoshes such great computers can now be carried in your pocket, at a fraction of the cost. But why would we want to run such a sophisticated OS on a mobile device? Well, because it has everything the phone needs. It has multi-tasking, the best networking, it already knows how to power-manage. Apple has been doing this on their notebooks for years; it has got awesome security and the right applications—everything from Cocoa (object-oriented programming for next generation applications) and the graphics, and it's got Core Animation built-in (a technology in Apple's next operating system, Leopard, which lets developers create groundbreaking applications) and the audio and video that OS X is famous for.

Above all, the base of OS X means that the applications and networking on the iPhone are truly desktop class. What this means is that the e-mail client, Net browser, music player, photo manager, calendar, maps application, etc. all work as you would expect them to on its Desktop counterpart, Mac OS X. These are not crippled software with severely reduced functionality like most software found on Symbian and Windows Mobile devices. The Internet browser lets you view fully functional HTML Web pages, the e-mail client shows you the full contents of your e-mail as you would see them on a computer, and the photo management application is the best one we've ever seen. iPhone owners will actually use these applications for serious work, rather than just as a novelty. This also ensures that the iPhone is fully multi-tasking. So you can, for example, read a Web page while downloading your e-mail in the background.

The iPhone syncs with both Macs and PCs using the same thirty-pin dock connector that the iPods use. The syncing is done through





The iPhone is a wee bit bigger than an iPod Video

iTunes. Jobs said they were learning from the iPod. Apple is going to ship their hundred millionth iPod this year, so there are tens of millions of people out there who know how to sync their iPod with their computer through iTunes. All you have to do is place your iPhone in the dock, and it automatically syncs with your PC or Mac through iTunes, simultaneously charging itself. iTunes will not only sync all the media content with the iPhone (audio books, movies, music, music videos, podcasts, and television shows), it will also sync all the data between the computer and the phone (bookmarks, calendars, contacts, e-mail accounts, notes and photos).

There are many unique innovations in the iPhone. One of them is the use of three really advanced sensors in the phone—the accelerometer, ambient light sensor, and proximity sensor. “iPhone’s accelerometer detects when you rotate the device from portrait to landscape, then automatically changes the contents of the display, so you immediately see the entire width of a web page or a photo in its proper landscape aspect ratio. The proximity sensor detects when you lift iPhone to your ear and immediately turns off the display to save power and prevent inadvertent touches until iPhone is moved away. An ambient light sensor automatically adjusts the display’s brightness to the appropriate level for the current ambient light, thereby enhancing the user experience and saving power at the same time.”

Apple has filed for over two hundred patents for new innovations in the iPhone. The iPhone comes in two variations with the only difference between the two being the storage capacity. Both of them have mammoth storage, with onboard Flash memory of 4 and 8 GB. It is a quad-band (MHz: 850, 900, 1800, 1900) GSM phone and is equipped with a lot of connectivity options. It has Wi-Fi (802.11b/g), EDGE, and Bluetooth 2.0 with EDR (Enhanced Data Rate). It also has a 2MP camera onboard. Apple claims that it can play 16 hours of audio or 5 hours of talk time, video, or browsing between recharges. It is also backward-compatible with most iPod accessories. Now let us dig deeper and explore the three main features of the iPhone.

#### 4.2.1 Widescreen iPod with touch controls

Jobs said that this was the best iPod the company has ever made, and we have to say, we completely agree. We are not audiophiles, but from whatever we know about this phone till now, we think it is going to be at the top of the list of wants of every music listener this Christmas. The iPod makes full use of the touchscreen interface and managing and playing songs through the touchscreen seems so fluent and natural, it gives the impression you're actually touching your music. The large widescreen is easily the best one to watch videos on. No longer does one need to squint on a tiny



iTunes' Coverflow view will be seen here too

screen while watching videos on the move. Finding music seems to be faster due to the easily navigable interface, and the presence of OS X must mean more powerful searching and sorting features. The album art looks gorgeous on the large display, there is a built-in speaker and there is Cover Flow, for the first time on an iPod. And unlike in iTunes, the Cover Flow on the iPhone is actually useful, and we can see that becoming the preferred mode of browsing through their music for most iPhone owners.

To get started with the iPod, you push an orange iPod icon on the lower right hand corner of the iPhone screen. Once in the iPod interface, we see five buttons across the bottom—Playlists, Artists, Songs, Videos, and More. The first feature one needs to be acquainted with is the scrolling. To scroll through a list of anything, you just place a finger lightly onto the screen and flick it in the direction we want to scroll to. So if you want to scroll the list of songs up, you just flick your finger in the upward direction and it scrolls like butter. The animation gives you a feel that it is rubber banding up and down.

To play a song, you click on the “Artist” button, scroll through the artists and tap on the one you want, and a list of albums pops up, followed by a list of the songs for the album you chose. Now there is a “Shuffle” option at the top. You can either hit that to play the whole album in any order or simply chose the song you want to play. What follows is not only a treat for the ears, but for the eyes as well. The name of the artist, followed by the title of the song and the album is displayed in a bar at the top. There is a “Back” button to go back to the list of songs and a flip button to rotate the gorgeous album art displayed below. If you intend to buy an



Perhaps we'll see a special “U2 Edition” of the iPhone too...

iPhone when it comes out, it is time to start tagging that cluttered library properly along with the album art. It will be worth it. The Previous, Play/Pause and Next buttons are at the bottom of the display followed by the volume control bar. For some reason, there seems to be no indication of the length of the track or the current playback position on this screen. This is quite odd, and we can only hope that they include those in the final shipping version. When you flip the album art around, you can see all the tracks in the current album complete with the track number and duration for each. At the top of the screen, there is a provision for rating the currently playing album on a scale of five stars, like in iTunes.

Now comes the most interesting part: you can simply turn the phone around and hold it horizontally while the iPod is running. The phone senses the change in orientation, automatically switches to landscape mode, and displays Cover Flow. Here you can simply browse through the covers using the flicking gesture with your finger and tap on any cover to have it flip around and display the list of songs in the album. This is an added functionality, lacking in iTunes, and it makes Cover Flow very useful. Click on any song to start the playback. At the bottom left-hand corner of the Cover Flow screen is the Play/Pause button, and there is an “Info” button at the right-hand corner which, according to our presumptions, will show you all the relevant information about either the currently playing album/track or of the album which is at the forefront in the Cover Flow navigation. After you’re done, simply rotating the phone back to its upright state brings you to the currently playing screen described above.

Of course, as with the iPod, you can make any number of playlists and play them conveniently. The “More” tab houses six other options—Albums, Audiobooks, Compilations, Composers, Games, and Podcasts. Selecting the “Albums” option lists all the albums stored on the phone in a list with a small thumbnail of the album art and the title of the each album. All the other options are pretty self-explanatory. The presence of the “Games” option

indicates that Apple will develop games that take advantage of the iPhone's huge touchscreen. However, this feature was not advertised at Macworld—maybe because no games has yet been developed that could be shown off to the audience.



Videos will rotate depending on the orientation you're holding the iPhone at

Clicking on the “Videos” tab brings up all the videos stored on the phone. The videos are organised under the following categories—Movies, TV Shows, Music Videos, and Podcasts. Each video is represented by a thumbnail, the title, artist, episode number, and the length. Click on any video and it starts playing it in the landscape orientation. There is apparently no provision for playing movies in the vertical position (though we do not see any need for that). All of them are played in full screen mode with no controls to obstruct the view. Tapping on the screen brings up the onscreen controls. There is a “Done” button at the top left corner that takes you back to the list of videos followed by the scrub bar for jumping directly to any position in the video. You can see how much of the video has been played on the left side of the bar and the remaining duration on the right. There is a small button with two diagonal arrows facing each other but its function is not known as yet. Towards the bottom of the screen are the standard controls—Previous, Play/Pause, Next, and volume control. Widescreen movies are played with an aspect ratio of 16:10 by

default (i.e. it takes up the whole screen and cutting out a little bit on both sides) and double-tapping on the screen while the movie is playing restores it to the default aspect ratio. Double-tap again to toggle back and forth. The iPhone also remembers how much a video has been played and if a video is quit in between and watched again a week later, it continues from that point on.

Jobs describes the response he got from an Apple employee about the iPod functionality of the iPhone—"You know, I was showing this to somebody; I was giving a demo to somebody a little while ago who'd never seen this before inside Apple and I finished the demo, I said, 'What do you think?' He told me this—he said, 'You had me at scrolling.'" Indeed, this seems to be the best portable media player in the market till date, and things are only going to get better with each revision. All in all, we think we can safely conclude that the iPhone truly excels in the media department.

#### **4.2.2 Revolutionary mobile phone**

The iPhone comes loaded with a flashy and fully-functional iPod, and it works quite well. Many people will probably buy it solely for the widescreen iPod it is. But at the end of the day, it is a phone and if it does not perform well in that department, it might turn out to be a total failure. Apple claims that they have reinvented the phone. Let's take a look.

Calling and managing contacts on the iPhone is easy and convenient, or at least, that is what Jobs wants us to believe. There is a revolutionary new feature called Visual Voicemail. On the iPhone, you can view all your voicemails as you view your e-mail. You can also selectively listen to whichever ones you want in any order. There is no need to call a number and listen to five voicemails serially. You can now browse through your voicemail. However, this is a feature that requires support from the network provider. Therefore, Apple has collaborated with Cingular (now acquired by AT&T) in the United States to provide this service to users. This means that this service might not be available in the Indian version of the phone because we do not have the system of

having cell phones locked to certain carriers in India. However, it could also mean that Apple might strike a deal with Hutchison Essar (now acquired by Vodafone), Bharti Telecommunications (AirTel), or some other specific provider to facilitate this service in India. This would mean that the iPhone will either be locked to one particular carrier, or would support the visual voicemail feature only on one particular carrier.

It is supposed to have excellent audio quality and is a quad-band GSM + EDGE phone. It lacks 3G though—but Apple plans to make 3G phones in future. It also has Wi-Fi (802.11b/g) and Bluetooth 2.0 with EDR (Enhanced Data Rate) inbuilt.

When you get a call, the name of the contact and where he/she is calling from (mobile, home, work, etc.) shows up on the top of the screen with your preferred wallpaper set as the background. At the bottom of the screen, there are two large buttons—a red “Decline” button on the left and a green “Answer” button on the right. And it rings, of course. Pushing the green icon at the lower left corner of the screen on the home screen brings up the phone application. There is a “+” button at the top for adding new contacts and five buttons across the bottom—Favourites, Recents, Contacts, Keypad, and Voicemail. We scroll through the list of contacts by flicking a finger across the screen. Tapping on any contact brings up all the details stored on the phone including, but not limited to, the photograph, all the phone numbers, e-mail addresses, home page, address, etc. There are two buttons at the top: “All Contacts” and “Edit”, and two at the bottom—“Text Message” and “Add to Favourites”. Clicking on any number initiates the call.



The in-call interface is quite impressive too

When the calling screen shows up, you realise what Jobs meant when he said that they'd reinvented the phone. It has an extremely intuitive and thought-out interface. On top of the screen is the name and photograph of the caller followed with the status of the call and at the bottom is a huge red button called "End Call". Right in the centre of the screen are six large buttons—mute, keypad, speaker, add call, hold, and contacts. There are no menus and no complicated options. You will no longer end up disconnecting the call while trying to call another number or turn off the speaker. And all of these buttons make use of subtle transparency which allows your wallpaper to show through! If a new call comes in while you are already busy on a call, there are two short beeps to indicate this and the pane in the centre (which houses the six options) smartly flips around to reveal two options—Ignore and Hold Call + Answer. The "End Call" button automatically changes to "End Call + Answer", while the bar on the top reflects the caller's name and photo and where he or she is calling from.

On clicking "Hold Call + Answer", the first caller is put on hold and the new call is activated. The bar on the top shows the names of both callers and the status of each call. The centre pane flips back but the "add call" button changes to "merge calls". The red button at the bottom changes back to "End Call". Tapping on any caller's name at the top of the screen puts the other caller on hold and activates that call. Tap the "merge calls" key and lo, you've created a conference call. The "merge calls" button changes back to "add call". The bar at the top now shows the names of both callers along with the status of the call. There is a little arrow at the right side on the top. Tapping on it lists both the callers separately, and there are little buttons next to each person's name for disconnecting the call and making it private.

Seeing the demo gave us the impression that everything is very well thought-out. The buttons are there when you need them and get out of the way when you don't. Everything seems to be just one touch away.



Adding any number to the list of favourites allows you to call them in just one click. To add a number to the favourites, you just tap the “+” button at the top right corner of the Favorites screen, and the list of all your contacts pops up. Tap on the contact whose number you want to add to your favourites, and a list of all his phone numbers comes up. It is interesting to note here that it does not display all the other information such as e-mail addresses, home page, etc. this time because they are not required. Tap on any number and it is added to the favourites list. There is an “Edit” button in the upper left-hand corner. Pushing that button allows you to move your favourites to different positions in the list and delete contacts from the favourites list.

The “Recents” tab brings up all your recent phone calls. There are two tabs here—“All” and “Missed”, and a button for clearing the Recents list. The “All” tabs lists all the recent calls using different icons to denote dialled and received calls, and shows the missed calls in red. The “Missed” tab trims the list down to just the missed calls. If there have been more than one call to or from a number, it shows the number of calls in brackets. The time and date of all these calls is displayed adjacent to the names and tapping on any name places a call to that number.

The “Keypad” tab brings up the keypad, which has really large keys for dialling the number, and a delete key for that deletes a single number on tapping it, and the whole number rapidly on holding the finger over it. The phone automatically formats the number as you dial it. There is a green key labelled “Call”, which places the call once the number is dialled. An Add button on the lower left lets you save the dialled number to the contacts list. The keypad, for some reason, also has the alphanumeric characters labelled over it. Since the phone features a virtual QWERTY keyboard, it is not clear what the alphanumeric characters on this keypad may be used for. They are probably just there to give it the feel of a real phone keypad.

Next in line is the most unique feature of the iPhone’s phone application, one that is totally unique to the iPhone—an industry

first: visual voicemail. When you click on the “Voicemail” tab, you are faced with a really busy screen. At the top left is the “Greeting” tab, which lets you listen to and change your voicemail greeting that callers will hear. On the right is the “Speaker” button, which turns on the speaker, and in the centre is the number of new voicemails. All your voicemails (new as well as the old ones) are listed below along with the date. Tapping on any name starts the playback and tapping it again pauses it. There is a bar at the bottom that allows you to skip to any position in the playback, followed by a green “Call Back” button and a red “Delete” button. So you’ve got voicemail how you want to listen to it, when you want to listen to it, in any order you want to listen to it with Visual Voicemail.



Listen to your voicemail the way you please

On to SMS: clicking on the green SMS icon on the upper left hand corner takes you to your Inbox. There is a new feature here too. Instead of having simple SMS texting, the iPhone has multiple sessions. So you can be carrying on conversations with people and every time you get a new message from them, you’ll be alerted to that and you can go check it out. This is similar to Gmail’s method of grouping together conversations. The standard Inbox has an Edit button at the top so you can select any SMS and forward it to others.

New messages are denoted with the number in brackets in the centre and there is a “+” button for creating a new text message. The list of conversations is shown below with the name of the contact, date, and slight previews of each. A blue bullet next to any conversation denotes a new message received.

Clicking on any conversation opens up a screen that shows all the messages sent to and forth in an organised manner and a full

QWERTY keyboard at the bottom of the screen. The format of displaying the SMS is identical to Apple's iChat messenger on Mac OS X. It looks exactly like an instant messaging window. The little keyboard at the bottom is phenomenal. It does error prevention and correction, and Jobs claims that "it's actually really fast to type on; it's faster than all those plastic keyboards on all these smartphones." Though it sounds like an overly objective claim, we'll have to wait and see how much truth there is to that statement.



The keyboard has all the alphanumeric keys along with caps lock, delete, return/enter, and space keys. There is another key that switches the alphanumeric keys to numeric keys and symbols and vice-versa. The keyboard can also be typed upon with two fingers simultaneously. A "Send" key sends the message and appends it to the conversation on the iPhone.

The QWERTY keyboard seems a little strange—we'll have to see how it is when the iPhone comes to India

Next up is photos, the last part of the phone application. It is slightly confusing why Apple is labelling this as part of the phone package: it really has no connection to the phone functionality. This could have been the odd one out, and they did not want to make a separate category just for it. The photo management application truly steals the show. Clicking on the "Photos" icon brings up the list of albums you have. "Photo Library" and "Camera Roll" are permanent fixtures here, and more albums can be added by the user. Clicking on the photo library brings up all the photos on the phone (apart from the ones taken from the onboard camera) and displays the thumbnails of the whole lot on the screen. Scrolling, as usual, is done with a flick of the finger. A numbered label at the top shows the total number of photos in the library. A

large translucent buttons runs across the bottom of the screen here which starts the slideshow.

Clicking on any particular photo opens it up in full screen mode, and you can just flick through the other photos by swiping your finger in either direction. If you encounter an image wider than it is taller, you can simply turn the device, and the phone will automatically switch to landscape mode and the photo will be displayed widescreen. You can just take your fingers and pinch them and then move them further apart to zoom into the image. Bringing them closer together shrinks the image. It gives the impression that you are actually stretching the image apart.

There are four buttons at the bottom of the screen (which appear only when you tap the display once, allowing unobstructed viewing of the photos using the full screen when they are not needed) that allow you to move to the next or previous photo or start a slideshow. There is also a button on the lower left that brings up three options—Use As Wallpaper, Email Photo, and Assign To Contact. On clicking the “Use As Wallpaper” button, a screen pops up that shows you a preview of what the photo will look like as the wallpaper. You can simply resize and move the picture here to suit your needs, and even swipe through to other pictures if you decide not to use that one as the wallpaper. After you’re done, simply clicking on ‘Set Wallpaper’ does the job and takes you back to the photo gallery.



Every phone needs a wallpaper...

Clicking on “Email Photo” slightly shrinks the image to fit it in the message’s body and brings up the compose window behind it, complete with the address and subject fields and the QWERTY key-

board (with an animation). Tapping in the first few letters of any person's name prompts the iPhone to offer suggestions from the address book, or you can use the little "+" icon towards the top left corner to bring up the contacts list and select contacts from there. You can, obviously, enter whatever you want in the body of the mail using the virtual keyboard and then press the "Send" button at the top left corner to despatch the mail. Once that is done, the phone automatically returns to the library you were viewing.

### 4.2.3 E-mail

The iPhone hooks up to almost any IMAP or POP3 mail service. IMAP, of course, is best, because you can keep all your folders and mail on the server and access it from anywhere. Yahoo! Mail is IMAP, Microsoft Exchange has an IMAP option, and .Mac Mail is IMAP as well. Gmail, AOL Mail, and most ISPs' mail are POP3. Yahoo! Mail is the biggest mail service in the world, they have over a quarter of a billion users—and they are going to provide free "push" IMAP email to all iPhone customers. This isn't just IMAP email, it is push IMAP e-mail, so when you get a message, it will push it right out to the phone for you, like with a Blackberry.

The e-mail Inbox has a "Mailboxes" button at the upper left corner which takes you to your list of mailboxes such as Outbox, Drafts, and your custom folders. There is a refresh button at the lower left that fetches new mail from the server, and a compose button at the lower right to write a new mail message. The centre of the screen lists all the e-mails you've received. The list is identical to the SMS inbox right down to the blue bullet that marks unread messages. The bar at the top, as usual, reflects the number of unread email in brackets. E-mails with attachments have the familiar paperclip icon beside them.



Read e-mail with full HTML

You can click on any message to open it in full screen view, which is capable of displaying inline photos and rich text, exactly as it would on a computer. Pretty much everything is present here; you can view other e-mails using the arrow keys, see the sender, date, and other details, reply to it or forward it, move it to some other folder, refresh it—basically, anything that you would want to do!

You can zoom in on any e-mail by the pinch-and-zoom method or simply double-tapping on it. The iPhone also parses out and recognises the phone numbers in e-mails, so you can simply tap on any phone number in an e-mail to call it. When you're viewing the Inbox, there are also two buttons at the upper right corner that let you toggle between the default full screen view and a split screen view. If you decide to go with the latter, the screen is divided into two parts (which are resizable) with the list of messages on the top half and the contents of the selected e-mail at the bottom. This is very helpful if you want to browse through your messages really fast and find a message you were looking for. So it's real e-mail, just like you're used to on your computer, right here on your phone.

#### **4.2.4 Breakthrough Internet Communicator**

This was the feature that was met with a pretty lukewarm response when Jobs announced it at Macworld, but when he was through with the demo, it was met with an enthusiastic cheer of approval. The iPhone features rich HTML e-mail and works with any IMAP or POP3 service. It has the Safari Web browser (the default browser on Mac OS X), which Apple claims is the first fully-usable HTML browser on a phone. The iPhone also uses Google Maps to bring the user maps, satellite images, directions and traffic. It also has widgets with the default two being weather and stocks. More can be downloaded. And it communicates with the Internet over EDGE and Wi-Fi, and the iPhone automatically detects Wi-Fi and switches seamlessly to it; you don't have to manage the network—it just does the right thing.

When you launch the browser, you are faced with a simple screen with very few buttons. There is a button for adding book-

marks, another one that stops a Web page from loading and changes to the reload button when the loading is complete, back and forward buttons, and a bookmarks button to browse through your bookmarks. The address bar itself functions as the status bar while a page is loading.



The full-featured browser shows promise

The default page is, of course, Apple's official site. The magic starts when you open a Web page. It is not a WAP version of the page, or any version that is compromised in any manner—it is the whole page as you would see it on a computer screen. Turn the phone on its axis and it switches to landscape mode, which makes for a better Web browsing experience on most sites.

Scrolling across a Web page is done with the same flick action used throughout the interface. Since the phone loads the whole Web site onto a tiny 3.5 inch screen, the text on most sites becomes very small and illegible. So you can get in with your fingers and pinch it, but there is an optimisation here—you can simply double tap on anything and it automatically fills up the screen with it. You can simply zoom in and scroll around and zoom in



Again, the orientation changes when you rotate the phone

even more. You can practically view any Web site any way it suits you. To click on any link, you simply have to tap it once.

You can look at multiple pages as well. There is a button at the lower right hand corner; when you push it, it shrinks down the page that is currently open and you can tap on a button at the lower left-hand corner to add a new page. You can then go to any other page you want on this page. Hit that button again and you are taken back to the screen where you can select the Web page you want or add a new one. There is a red close button on the top of every page, you simply tap on it to close it. There is no limit to the number of pages you can simultaneously browse. And that concludes Safari, a full-featured, fast Web browser on a mobile device. Jobs cannot refrain from boasting about the features from time to time: "If you've ever used what's called a 'Web browser' on a mobile phone, you'll know how incredible this is—I hope you never really know, because it's bad out there today and this is a revolution of the first order to really bring the real internet to your phone!"

#### 4.2.5 Widgets

There are these tiny widgets bundled with the iPhone for stock information and weather forecasts. Nothing extraordinary here. The weather widget is beautiful, with icons to represent various weather conditions. It gives you a lot of options such as how many days of the week the widget should display, whether it should include the high and lows or not, and whether it should show the temperature in Fahrenheit or Celsius. The stocks widget lets you track the stock market condition of as many companies as you want (Apple is on the default set, of course—and Microsoft is conspicuously absent!) and it is capable of showing a lot of data in units or percentages, uses different colours to denote the various conditions, shows graphs over a period of as many months as you define. All



Dashboard-style widgets will be available on the iPhone too



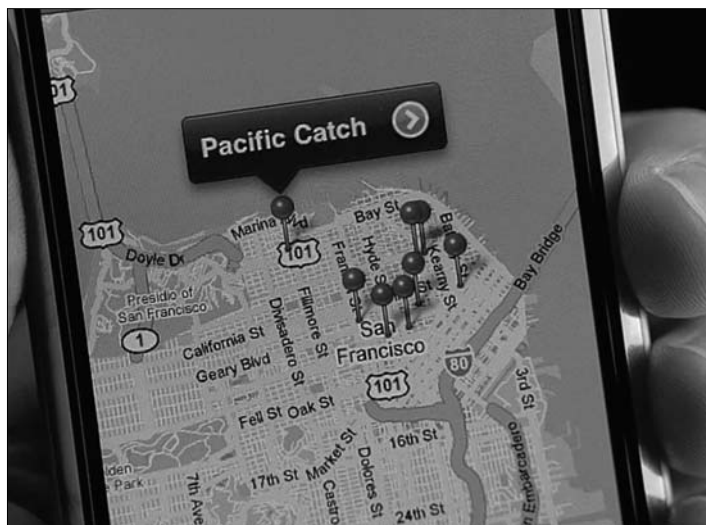
things considered, it is a handy addition to the list of features—certainly not something you cannot live without, but you'll be grateful they're there.

#### 4.2.6 Google Maps

This is the last major feature in the iPhone and it does not disappoint. Eric Schmidt, Google CEO, joined Apple's board a few months ago and this is the first product to come out of the relationship between Apple and Google. As soon as you tap the Maps icon, it takes you to a map of the world (set by default to show you North America). There is a Google search field on the top in which you can enter the name of whichever place you want to go to. If you enter "San Francisco", for example, it will show you the map of California and will drop a red pin onto the map to point out the exact location of San Francisco. Now you can search for



The stock-ticker widget in action



Google Maps on the iPhone—though this isn't likely to be much use in India

any place in San Francisco you want to see, for example “Starbucks”, and it pinpoints (literally!) all the Starbucks outlets located in San Francisco.

Now you can click on the “List” tab at the bottom of the screen and it will list the details of all the Starbucks it pointed out. You can click on the one you want to know about and it will show you only that particular Starbucks outlet on the map along with a button for more information about it. In the information panel, if there is a phone number, you can directly place a call to it. Of course, you can zoom into the map with whichever method you prefer and can also view the satellite imagery of any place in the world. That’s about it; it is quite possibly the best implementation of Google Maps on a handheld device.



Handheld tourism on the iPhone

#### 4.2.7 Drawbacks

But don’t whip out that wallet just yet. Just like any electronic product on the market, the iPhone has its own set of drawbacks and you need to take those into account before making a decision.

**No Keyboard:** Steve Jobs touted the multi-touch user interface, and its ability to make the phone function better than phones with keypads, as the phone’s biggest draw. Admittedly, the multi-touch interface is wicked, the scrolling and pinch-and-zoom will surely be a pleasure to use. The screen also provides virtual feedback in the form of clicking sounds when you tap the screen and a subtle visual effect whenever any button is pressed. The virtual keyboard looks promising, with its ability to correct errors automatically. But a touchscreen can never imitate the feel of tactile feedback that a physical keypad provides. There also seems to be no handwriting recognition on the iPhone (this is unconfirmed, however) and it is impossible to type on the iPhone without actu-

ally looking at the screen (though it is almost equally impossible to type on full QWERTY keypads on most smartphones without looking at the phone too). This is a hit-or-miss idea. It has the potential to be a total hit if the screen works as flawlessly as promised, but it also has the potential to be a severe roadblock for the phone. Touchscreen phones have never been a hit with the SMS junkies of the world, and much as Apple would like to change that, it has a strong potential to backfire.

### **Additional software:**

Jobs, when asked about whether the iPhone would allow third-party software, said that though Apple would be releasing new applications for the iPhone, it won't allow unrestricted third-party software like on PCs or Macs. "We define everything that is on the phone. You don't want your phone to be like a PC. The last thing you want is to have loaded three apps on your phone and then you go to make a call and it doesn't work anymore. These are more like iPods than they are like computers." Sounds pretty dismal... It does get better though: "These are devices that need to work, and you can't do that if you load any software on them. That doesn't mean there's not going to be software to buy that you can load on them coming from us. It doesn't mean we have to write it all, but it means it has to be more of a controlled environment." We've quoted this because it is not very clear what will be the process of installing software onto the iPhone at this point.

### **Windows Compatibility**

It is a given that the iPhone will connect and synchronise flawlessly with Macs, but the extent of compatibility with Windows through iTunes remains under a shadow of doubt. The iPhone is supposed to synchronise all your contacts, calendars, photos, notes, bookmarks and e-mail accounts from both Macs and Windows through iTunes. This means that the next version of iTunes will have such functionality built into it so that it can connect and synchronise with the Address Book, iCal, iPhoto, Safari, and Mail applications on a Mac. But will it be just as efficient on a Windows PC? Will it be able to flawlessly integrate with the

Address Book, Windows Calendar, Windows Photo Gallery, Internet Explorer, and Windows Mail (formerly known as Outlook Express) on Windows Vista too? Even if it does, what about Windows XP, which has no default calendaring or photo management application built into it? It is a given that the iPhone will very easily and automatically synchronise all the media from iTunes (like the iPod) but if it is not just as efficient in synchronising the data on Windows computers, it will be a deal breaker for most people.

### **The screen**

It has a beautiful, large screen that serves as its primary user interface. This means that people will have to play on that screen with their fingers all day long—and those fingers might be sweaty, oily, or have long nails. Will the iPhone be able to resist scratches and fingerprints? If you go by Apple's past record, that seems like a distinct impossibility. There have been a lot of complaints about the iPod nano being extremely prone to scratches. The MacBooks have also suffered from similar problems. Unless Apple has done some major improvements to the quality of their displays, potential iPhone customers might be deterred by what would surely be a very scratch-prone screen. What makes matters worse is that it is extremely likely that you cannot cover the iPhone's screen with any sort of protective screen because multi-touch technology apparently needs finger contact to function. A closer inspection of the demo unit Jobs was using onstage at the Macworld Expo reveals that it was covered with a lot of fingerprints. All in all, that is a dismal picture, unless there are going to be drastic improvements in the final shipping version (which is quite likely).

### **Single handed operation**

A wide phone with a huge touchscreen will most certainly require the use of both hands at all times. So if you are travelling in a local train and have not managed a seat for yourself, you will either have to keep the phone in your pocket or risk being shoved by someone into another person while you use both your hands on the phone. However, this is only a perceived drawback in our opin-

ion. The phone fits quite comfortably in the palm of your hand, and at a thickness of just 11.6mm, is one of the slimmest phones around. So we think it might be possible to use it with your thumb while holding it in your hand. We'll have to wait and see if single handed operation on the iPhone is possible or not.

### Google Maps

Yes, you can indeed search for all the Starbucks in San Francisco and even get directions to them along with its phone number and address. However, this level of detail is not offered in India by Google Maps. The best you can do in India is search for a city and view the map and satellite imagery for it. Even the maximum zoom level in the satellite imagery is pretty dismal. The only landmark it recognised of the tens of options we tried was the Taj Mahal. It had no idea where the Red Fort was in New Delhi, or the Qutab Minar, IIT Kharagpur, the Lotus Temple, Jantar Mantar, pretty much anything in India apart from the cities and the Taj Mahal. This means that all that fancy stuff you can do with Google Maps on the iPhone is limited to the United States. We can only hope that Google gets its act together and provides extensive Google Maps coverage in India.

### The Camera

A two megapixel camera! On Apple's latest phone! That's like so last century! OK, so maybe the reaction of potential customers won't be that dramatic, but it is pretty disappointing that a phone that Apple will launch in June 2007 and will cost a lot should only have a 2MP camera onboard. A year or two earlier, it might have been acceptable, but we have 3.2 and 5 megapixel phones from other companies in the market today. If this were a product from some other company, it might still have been ignored without much grief—but this is Apple we are talking about, a company supposed to be leading from the front.

### Limited memory

At first glance, a total memory of 8 GB seems pretty sufficient for a phone. But let us not overlook the fact that this is not just a phone, it is a full-fledged portable media player, one that has a 3.5-

inch display that offers pretty decent video playback. How long would it take a person, the kind who would splurge on this phone, to cram every last nook and cranny in that Flash drive with data? And then they'll want more and they won't be able to have it—and this would certainly not make them happy. There is no such thing as enough storage. Apple should ideally have provided a much higher capacity drive on this thing or at least should have provided a way to expand the memory with memory cards.

### **The battery**

If you have seen an iPod, you know that its battery is fixed in place and is not replaceable by the user. The day your battery snuffs it, you'll have to send the unit to Apple and they'll replace it for you. Well, if the iPhone uses the iPod's dock, is compatible with its accessories, uses the same software to connect to a computer, and is made by the same company—how can it not inherit its predecessor's nagging traits? One might argue that since this battery problem did not affect sales of the iPod, it isn't very likely to affect the iPhone either. However, it is one thing to live without one's music for a few days, but a completely different thing altogether to part with your phone for even a single day. Whether it will affect the iPhone's overall sales will be decided when the phone actually hits the market, but this was a drawback with the iPod and is an even more significant one with the iPhone.

### **Price**

All those entire new and innovative features in a pint sized device. Seems quite a feat, but that feat costs quite a lot of money to achieve, and who better to bear the brunt of all those expenses than the customer? The iPhone costs \$499 for the 4 GB version and \$599 for the 8 GB version in the USA. In terms of direct conversion, that amounts to about Rs 22,000 and Rs 26,300 respectively. That seems quite reasonable for the number of features it offers. But direct conversion is not the way to go. For one thing, the iPhone comes with a two year contract of using the phone with a Cingular connection which considerably reduces the price of the phone. But such a system is not prevalent in India on the GSM network.

Secondly, there are all those taxes and duties that are levied on these phones which jack up the prices. We can only guess how much the phone is going to cost when it comes to India, but if the current prices are any indication, the Indian price is not going to be a pretty figure.

## 4.3 In Conclusion

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Whether you are going to want this phone or not depends on whether you read the features first or the drawbacks. When you read the features, you will be lusting for one of these beauties, but when you read the drawbacks, you might not want to touch it with a ten-yard stick. It also depends on whether you have ever used a Macintosh. If you have, we're sure you knew all there is to know about this phone already, and probably have the dough stacked up ready to be spent on a shiny new iPhone. In the end, it all comes to what compromises you are ready to make for a fantastic user interface, widescreen iPod, Internet tablet, the killer looks, and the flaunt value of owning an Apple product. And of course, whether you are willing to spend the moolah on one is a factor!

# Mac OS X



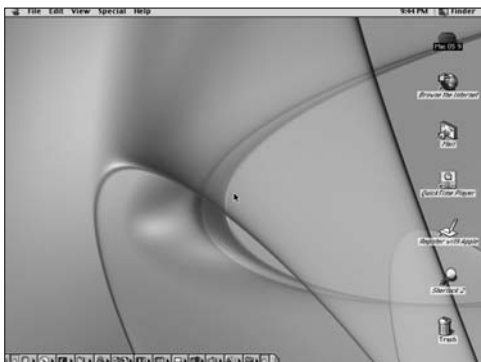
Mac OS X is the name of Apple's proprietary operating system, which ships with all Macintosh computers. It is fundamentally tied to the hardware it runs on, and is available exclusively to users of Apple's computers. It was officially launched on Saturday 24 March 2001. The first version was Mac OS X 10.0 "Cheetah" and it retailed for \$129.



## 5.1 What is Mac OS X?

People make two very common mistakes about the name “Mac OS X.” The word “Mac” is short for “Macintosh,” and is therefore not supposed to be written “MAC.” The other mistake is that people pronounce the “X” in “Mac OS X” as “ex”; it is supposed to be the number 10, so you pronounce it “ten.”

When Steve Jobs returned to Apple, it was in a dire state, the reason being that the Mac OS was very outdated and hadn’t seen a revision in years. Therefore, when Apple announced Mac OS X, it was met with an enthusiasm that can



The Classic Mac operating system

hardly be overstated. The Apple faithful had been waiting fifteen years for a worthy successor to the classic Mac operating system. Several had even jumped the gun and switched to the only commercial alternative, the Windows OS from Microsoft. Mac OS X had been through a series of code names in the development stages—Taligent, Copland, Rhapsody, and Cheetah. The last was supposed to be just an internal code name, but it sounded cool enough as a branding for the final version, so it stayed on when the product left the labs.

OS X was supposed to regain some of the lost market share for Apple, the market share that was lost to Windows 95 when it was released in 1995. Consumers flocked to Windows 95 in droves. Sure, it lacked the fine polish of the Mac OS, but it was cheaper and compatible with all IBM PC clones. It wasn’t “insanely great,” but for most people, it did the job. After all previous attempts at

creating a next-generation operating system to leap ahead of Windows had failed, the second coming of Steve Jobs and the acquisition of NeXT gave Apple one final window of opportunity.

It was a fundamental divergence from the classic Mac OS. This operating system was completely based on the XNU kernel and was very “Unix-like.” (XNU is the name of the kernel used in the open source Darwin computer operating system, which Apple uses as the foundation of Mac OS X. It is a hybrid kernel based on a mixed Mach kernel and the FreeBSD kernel codebase. XNU is a recursive acronym for “XNU is Not Unix.”) This ensured that it was extremely stable and secure. The core is called Darwin, and is completely open source. Apple added a lot of custom technologies to Darwin such as the QuickTime engine, the Aqua interface, Finder, etc. Pre-emptive multi-tasking and memory protection were some of the core technologies Apple introduced, which ensured that the OS could multi-task effectively with all the resources shared among the various applications as and when required. They also ensured that an application crash would not take down the entire system.

The Aqua interface was the most distinct addition to the Darwin core. It gave the operating system a beautiful, liquid sort of look and feel. Windows XP was released a short while after Mac OS X, and Mac users had the opportunity to sneer at the decidedly ugly looks of XP when compared to Cheetah. The Aqua interface has undergone a lot of refinement over the years and compared to the smooth and minimalist look of Tiger today, Cheetah looks a bit too gaudy; but at the time, it was the gold standard in interface design.

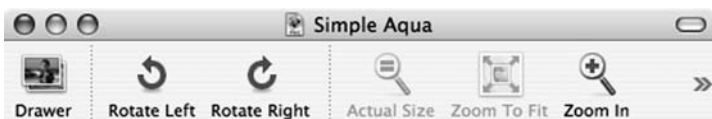
There have been five versions of OS X so far—Cheetah (March 2001), Puma (September 2001), Jaguar (August 2002), Panther (October 2003) and Tiger (April 2005). Though all the other versions had to be paid for, Puma was basically a bug-fix release that was released as a free update for existing Cheetah users. The forthcoming version of Mac OS X is called Leopard, and is expected to

ship in October 2007. As Apple puts it, “Just as Vista tries to get closer, Mac OS X Leopard is right around the corner—ready to leap even farther ahead.” There will be a lot of comparisons of Tiger to Vista in this book, but it is to be noted that Tiger is already a two-year-old operating system, and that the real competitor for Vista is going to be Leopard.

## 5.2 Look And Feel

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The user interface of Mac OS X is called Aqua. It introduced a lot of interface elements into the market such as shadows, transparencies, animations, three dimensional objects, hardware acceleration, etc. The Aqua user interface itself is divided into three kinds of interfaces—simple Aqua, unified Aqua, and Brushed Metal. Applications such as Finder, iChat, Safari, Address Book, iCal, QuickTimePlayer, etc., use the Brushed Metal interface, while most other applications from Apple use the unified Aqua interface. The simple Aqua interface is essentially being phased out but can be seen on some Apple applications such as Chess, Image Capture, Internet Connect, Preview, Sherlock, TextEdit, etc. The pro applications from Apple (which are sold separately) have a different dark theme. The only



The simple Aqua interface

exception to these UI conventions is GarageBand, a hybrid of the unified Aqua, pro, and a unique wooden user interface. Though this causes some inconsistency within various user interfaces in the default set of applications in the OS, the overall look and feel of OS X is aesthetically pleasing and appears well rounded.

When you boot into Mac OS X, you will be greeted with the standard desktop—which consists of the menu bar, a Finder window (the Mac OS counterpart for Explorer in Windows), and the



Unified Aqua interface

dock. The menu bar, from a Windows perspective, does some of the jobs that the Taskbar does, and is also a universal menu bar for every application—unlike in Windows, which used to have the menu bar integrated into the interface of each application.

(Microsoft has tried to completely do away with menus in Windows Vista.) At the top left is the Apple menu, which does a lot of functions, such as telling you your Mac's configuration, updating the software, letting



The standard desktop

you change system preferences, launch recent items, and give you access to power options, but this menu is seldom used because everything on this menu can be accessed individually from different locations more conveniently.

Then there are the standard File, Edit, View, Windows, Help, etc. menus, and at the right of the menu bar reside some of the things that you would need to change or look at in a glance such as the Internet, Bluetooth, Wi-Fi and battery states, the volume and time, etc. There is also the name of the current account you are logged into, and clicking on that allows you to switch

between your accounts quickly. It's worth mentioning here that the switching business is pretty dramatic because the whole desktop revolves on its axis giving you the illusion that it is a three-dimensional cube with the different



The Apple menu

desktops on separate sides of the cube. On the extreme right lies the button for Spotlight, a new feature of Mac OS X that lets you run searches on the whole system and gets the results lightning fast.

The desktop in itself is the same as that of Windows, except that you can set the wallpapers to auto-rotate, and the icons are on the right of the screen by default. A typical Finder window has two buttons for back and forward, and three buttons for the different views that allow you to “show items in a list, in columns, or as icons.” There is another button that does some miscellaneous tasks.



The three dimensional cube you see when switching users

At the top right is the ubiquitous search bar. The side of the Finder window has a configurable column that hosts shortcuts to the most commonly-visited places on the system. The rest of the window shows all the items in the Finder in the chosen viewing mode. It basically looks like a simplified Explorer window.

The dock might initially be confusing for new users of the OS. It does a lot of things: it serves as a place to store shortcuts to various applications and files for launching them quickly, houses the minimised windows, and is an indicator for what applications are running at any given time. The icons are not static and are sometimes used to display important information. So, for example, the calendaring application's icon displays the date, and a torrent client's icon would display the download/upload speeds. The dock can be set to auto-hide, and magnification can be turned on. When the latter is done, rolling the mouse over the dock makes it bulge and expand so that the icons near the mouse get magnified. This is helpful when the dock is overloaded with items and the icons are tiny. It can be placed on the left, right, or bottom of the screen, where it is by default.

Significantly, the dock is the only place in Mac OS X that has the trash can, so it is pretty important. Though the dock can be set to auto-hide, it cannot be turned off.

Apart from the desktop, there is a new feature in Tiger called the Dashboard, a pretty slick-looking interface that allows you to have mini applications, called widgets, that perform specific (generally Internet-related) tasks. It has some whiz-bang effects that never stop looking cool. Another utility that Apple ships with new Macs nowadays is Front Row, a Windows Media Center-like application that allows you to remote control your Mac from across the room. It has a simple, minimalist interface, but given a choice between functionality and minimalism, we would certainly prefer the former—and Windows Media Center is looking pretty good in Vista. This is one area where Apple needs to up their standards.

Then there is Exposé, the revolutionary window management feature in Mac OS X that allows you to work better with multiple windows while maintaining the coolness factor. It looks and works well, and when compared to Flip 3D in Windows Vista, it effectively crushes Microsoft's hot new feature.

## 5.3 Functionality And Productivity

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Macs are considered unique because they're supposed to inspire creativity, have unrivalled security, are the industry leaders when it comes to design—and can run all operating systems easily. The purpose of this section is to educate you on the number of things you can do with a Macintosh, but a thorough understanding of the subject would require a lot more than a little book. Here we'll look at some of the greatest features of Mac OS X.

### 5.3.1 Efficient Multi-tasking

Mac OS X offers the following features for managing multiple windows: Exposé, the Dock, and [Command] + [Tab]. The Windows Vista counterparts for these features are Flip 3D, the

Taskbar, and Flip. Flip 3D has heavily been touted by Microsoft as one of the major features of Windows Vista: “Windows Flip 3D uses the dimension of visual depth to give you a more comprehensive view of your open windows, helping you sidestep chaos even as you juggle myriad open files and programs. Navigating your desktop has never been this fun.” Yes, fun it is, but it isn’t much else. On hitting the [Windows] + [Tab] keys, Flip 3D kicks into action and organises your open windows into a swanky three-dimensional rolodex.

Now, there are many problems with this approach. It doesn’t let you see the whole contents of any window except the one leading the pack; small windows can sometimes be completely obscured by the larger ones; rolling over any window with the mouse does not give any information about the window; and drag and drop does not work among the windows. To top it off, if the number of open windows exceeds eight, the windows at the back disappear, appearing only on hitting the [Tab] key while simultaneously hiding the first window. The illusion of a 3D pack of windows over a 2D desktop is not a very pleasant one either. All in all, this is a somewhat good idea very poorly implemented.

Compare this to Exposé, which neatly tiles all your windows over the desktop, showing you the full contents of each one and displaying the title of the Windows in distinctly large letters as you roll over them. Pressing [F11] moves all the other windows to the background and fades them and brings all the windows of the currently active application to the front. Pressing [Tab] cycles between the various open applications, and [Command] + [~] cycles through the different windows of the application. It is the best possible way to multi-task.

Flip has been given a nice touch by Microsoft because it now includes live thumbnails when you cycle through the windows. However, as you cycle through the windows, you cannot use any shortcuts to close, maximise, or minimise the windows. You also cannot switch to applications that do not have any windows open

such as instant messengers, security programs, etc. The taskbar now displays live thumbnails when you roll your mouse over the buttons for the windows. It wins over the dock in this aspect because though the dock displays live thumbnails too, they are much smaller than the thumbnails in Vista.



Compare this to Exposé

When you hit the “Show Desktop” button on the taskbar, all the windows are minimised to show you the desktop. But when you select a single window from the taskbar or launch something new, the other windows stay minimised. That is, if you have fifteen windows open, you have to click on all fifteen of them individually to restore them. On Mac OS X, the [F11] shortcut will show your Desktop and bring back all the windows, no matter what you do in between.

### 5.3.2 The Dashboard

One of the most important additions to Tiger was the Dashboard application. It is primarily a different layer from the OS X desktop that appears and goes away as the user desires. This layer has a bunch of self-contained, mini applications called “widgets” that perform some specific and highly specialised tasks. So the weather widget fetches up-to-date weather forecasts from the Internet, the world clock displays the time of cities around the world, the calendar widget is just concerned with making sure you know all about dates—you get the idea. The default widgets bundled with Dashboard are Address Book, Business, Calculator, Calendar, Dictionary, ESPN, Flight Tracker, Google, iTunes, People, Ski Report, Stickies, Stocks, Tile Game, Translation, Unit Converter, and Weather.

It's pretty handy because every time you want to know the temperature outside, you simply invoke the Dashboard with the click of a key or a flick of the mouse—and there you have it. The





The OS X Dashboard can be quite useful

widget you last used also remains the active one even if you exit the Dashboard and return to it later. So if you're working on a long paper and need to do a lot calculations time and again, you just invoke the Dashboard each time and start typing directly into the calculator. You can also drag stuff from the Desktop onto the dashboard, such as text into the dictionary widget to know its meaning, or any image onto the very handy ImageShack widget, which uploads the image to ImageShack and copies the code to the clipboard. So you simply drag an image onto it and paste the code wherever you want. If you drag a widget out of the shelf and exit the Dashboard, the widget itself floats on top of the Desktop. So you could drag the Stickies widget out of the Dashboard, and it will stay in view at all times, reminding you to take your puppy for a walk.

At the time of this writing, there are around 3,000 free widgets on Apple's download site. Within a span of two years, the sheer convenience of creating widgets has resulted in there being widgets for nearly everything the Dashboard is capable of doing. From blogging to webcams and networking to music, it's difficult to imagine that a user would need a widget that is not already there

on Apple's Web site. Some are very useful; others are practically nonsensical goofiness.

There is a widget that exists solely to imitate the sound of a broken radio; that is the only thing it does. Still, it has in excess of six thousand downloads to its credit (and no, we did not download it). That doesn't mean there aren't any useful widgets; there are a lot of genuinely useful ones that can make life a tad easier.

### 5.3.3 The Best Of All Worlds

Mac OS X is the only operating system that can run Linux and even Windows applications at near-native speeds. There are two types of software that can enable this: those that allow you to run any operating system as a separate application on top of OS X, and those that allow you to run your Windows and Linux applications, seamlessly integrated on Mac OS X without the overhead of running the entire operating system. And it's not rocket science either; it is very easy. This text is being written on Microsoft Office Word 2007 running on Windows Vista Ultimate, which is running on Mac OS X using the Parallels Desktop virtualisation software.

Here's another bit of trivia: installing Windows on a Mac is easier than installing it on your regular PC. When you start Parallels Desktop, it starts a very user-friendly wizard that guides you through choosing the operating system you wish to install and entering your name and serial number. After that, all you have to do is insert the CD/DVD. Or you can even make an image on your hard drive and point Parallels to that; the installation is more than twice as fast if you use a disk image. Once the installation has started, you can go and get yourself a cup of coffee while Parallels automatically answers all the dialog boxes that pop up during the installation, and installs the OS for you. Once that is done, it automatically installs Parallels Tools, which allow your mouse to work seamlessly between both OSes and enable support for drag-and-drop functionality between the two operat-



You don't have to be restricted to Mac-only applications...

ing systems. When you return, the OS is installed with all the drivers in place and is ready to use.

Then there is the other software called CrossOver Mac, which allows you to install Windows applications on Mac OS X without the need to install Windows itself. For example,  $\mu$ Torrent is downloading torrent files using CrossOver at this moment on this computer. Thus, you can use Apple's Mail, Microsoft Outlook, or Evolution Mail as your e-mail client, and you can look at Safari, Internet Explorer, and Konqueror and choose any as your browser of choice. You can have a chat client from Linux, a graphics application from Mac OS X, and a Web browser from Windows—all running together on one operating system.

This does not mean, however, that Mac OS X lacks good applications. Final Cut Studio, Aperture, Logic Pro, and Shake are Apple's pro applications that have powered many of Hollywood's blockbusters. Guitarists and musicians the world over swear by GarageBand, a component of Apple's iLife suite, which is bundled with every Mac. There's QuickSilver, an immensely powerful freeware application that changes how you interact with

your Mac. There are thousands of great applications for the platform.

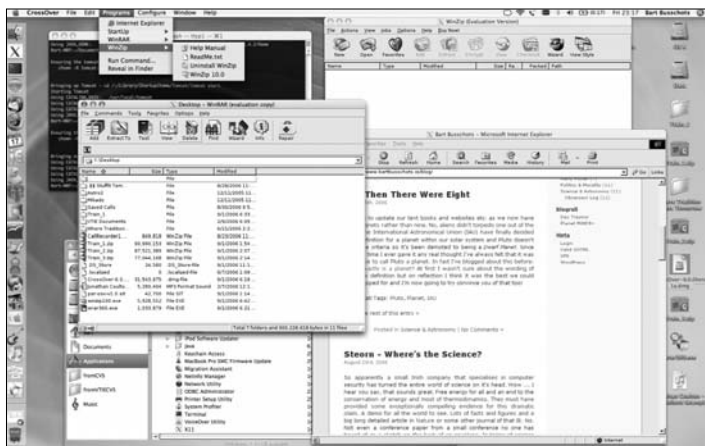
The move to Intel was a masterstroke by Apple that has changed the way people look at Apple Macs. It has made possible previously unheard-of concepts such as running Windows on a Mac. Things are looking up and the future can only be better.

### **5.3.4 Intuitiveness / Ease Of Use**

We would like to begin with a couple of examples. When you plug in a digital camera using the data cable into a Macintosh, the iPhoto application launches automatically and asks you whether you would like to import all the images from the camera you just plugged into the system. When you say Yes, it asks you whether you want to delete the images from the camera after they've been imported. Once you've selected the option you want, the photos are downloaded into a date-stamped folder, ready for attention from you, and the camera's memory card is empty (if you opted for it)—ready for your next photo shoot.

If you are a Mac user and decide to buy a new one, you should buy a FireWire cable along with it. You simply plug the FireWire cable to the appropriate port of both Macs, and the newer Mac will automatically ask you whether you want to duplicate the older Mac on the newer one. All you have to do is hit Return and go get a coffee for yourself while you wait for the Mac to finish copying everything from the other computer. Once that's done, the newer machine is an exact duplicate of the older one, screen-saver and all. What could have been a task that would take up the whole weekend—reloading software, moving files, recreating Internet transfer protocols, configuring other settings, etc.—can be completed in under an hour and without reading a single word from a manual or seeking someone's help.

What these two examples show is that somebody in Apple's R&D labs anticipated exactly these sequences of events, and pre-wired the computer to handle them in a way that even a techno-



CrossOver Mac allows you to install Windows applications on Mac OS X

phone could handle. This is the trademark simplicity of the Mac operating system. Most things are engineered in a way that makes the task seem much less daunting than it could have been. You can simply press a keyboard shortcut ([Cmd] + [Ctrl] + [D]) and hover your mouse over any word on a Web page in Safari or an e-mail in Mail to see its dictionary entry in a floating box that appears below the mouse pointer. iCal, when running, shows the current date in its icon in the dock, and Mail badges its dock icon with the number of unread mails in the Inbox. If you have an Apple notebook, you can scroll in any direction on any page simply by placing two fingers on the trackpad and sliding them in any direction you want. For right-clicking anywhere, you just tap both fingers together on the trackpad. Once you've used the trackpad on Apple notebooks with Mac OS X, you'll feel clumsy using trackpads on Windows-based computers.

### 5.3.5 Applications

Most applications on Mac OS X require no installation at all. If you have seen  $\mu$ Torrent on Windows, you've seen how most Mac OS X applications work. You just download the application, which is generally compressed in either a ZIP archive or a DMG disc image, extract it, and move it to either the Applications folder or any

other folder you choose to. An application is not a folder full of myriad sorts of files—it is just a single file with the “APP” extension, self-contained and independent of any other files. So you don’t need to install it, you can just move it around on the system and to uninstall it, you just delete it. It is that simple. It might take some days for a switcher to get used to the simplicity.

### 5.3.6 Working With Files

Another major addition to Tiger was Spotlight, the revolutionary search utility that is deeply integrated with the operating system at the core level, and indexes every file on the system to facilitate instantaneous and accurate system-wide searching. It always keeps running in the background and tracks changes as and when you make them, keeping the index constantly updated. However, it uses very little of the system resources and does the job as it is expected to, flawlessly. Hit the shortcut ([**Cmd**] + [**Spacebar**]) and the little blue search bar pops up at the top right corner of the system, with the search field active. As you enter in your query, Spotlight displays results as you type, narrowing down results with each new character. Almost always, the file you are searching for is at the top of the list, ready to be launched. If not the top hit, it most likely is present in the list of the other files. Just scroll down to the one you want and hit **Return** (or [**Cmd**] + [**Return**] to reveal the folder the file is in).

Clicking on “Show All” takes you to a neatly-designed window that lists all the files it found for your search query, and allows you to view several details for these files, group them based on kind, date, and people, or just show a flat list, or filter them out based on criteria such as time and location.



Another major addition to Tiger was Spotlight

Spotlight indexes almost every sort of data on the system, be it applications, system preferences, documents, folders, mail messages, contacts, events and to do items, images, PDF documents, bookmarks, music, movies, fonts, or presentations. The search results are always sorted according to the type as the default.



Clicking on “Show All” takes you to a neatly designed window

Spotlight brought along with it the ability to have smart folders. Smart folders behave like regular folders, but only contain the aliases of files that match a certain search criterion. These are self-updating folders. So, if you create a smart folder with “apple” as the search term, all your files that contain “apple” will be displayed in the folder. Not just the files, but all the fourteen categories listed above.

A smart folder behaves just like a regular folder, and has the same views and sorting options. There are only two problems with Spotlight: it does not support Boolean operators like Google does; and second, it is so effective that it makes users careless about managing the system!

Windows (even Vista) has always had static shortcuts, while Mac OS X has dynamic aliases (the Mac term for shortcuts). What this means that when you create an alias to a file in Mac OS X, the alias always sticks to the file whether you rename it or relocate it. So it will always launch the file you initially created it for. Even if you move the target file to the trash, the alias on being launched will tell you that it “could not be opened because the original item

is in the Trash.” Only when the file is flushed from the trash will the alias give you a clueless statement that it could not find the file. You can even manipulate “busy” files on OS X. If a file is open in MS Word and you try to rename or move it, Windows will reprimand you for trying to do so. Mac OS X will not. You can easily rename and even move a file while it is in use by some program. You won’t lose anything so even saving the file is not required. If you rename a file while it is in use, the application it is open in will automatically reflect the change.

### 5.3.7 Drag And Drop

Is this a feature worthy enough to merit its own heading? You bet it is. Given that the Macintosh was the first computer to bring the mouse with its drag and drop capabilities to the table, it is hardly a surprise that Mac OS X has complete support for drag and drop throughout the operating system. You can pluck any image, link or text from a web page in Safari and drop it anywhere on the hard drive. So you can pick a sentence from a webpage, invoke Dashboard, and drop it onto the translation widget, pick an image and drop it onto the iPhoto icon, or drag any link and drop it onto a Web browser to open it. But this is just the basic functionality. Select any text and drag it onto the Desktop to save it as a text clipping. You can even activate Exposé while dragging something, so you could drag an image onto a Finder window and save it anywhere. Mac OS X has spring-loaded folders, so when you drag an item onto a folder, it automatically springs open to allow you further access to the innards. You can drag files and folders into dialog boxes to automatically take you to that location in the folder hierarchy. Dragging CDs and other peripherals onto the trash ejects them, Mail starts a new message addressed to it when an e-mail address is dropped on its icon, dragging anything onto it adds it to the dock, etc. This extensive support for drag and drop makes using Mac OS X much less of a drag (pun unavoidable) when compared to competing operating systems.

### 5.3.8 Drawbacks

Not everything is perfect in the little kingdom of Apple, though. There are various little annoyances all over the operating system that



make even the most seasoned of Mac users stare at the screen dumbfounded. The first problem is that there is little consistency. The Finder, Dashboard, Mail, iTunes, iPhoto, GarageBand and TextEdit all sport a different sort of user interface. There are at least seven different kinds of user interfaces in a default installation of Mac OS X. The pro applications have an entirely different user interface for them. Though a casual Mac user would hardly even notice these sometimes subtle differences between the user interfaces of various applications, it is something that has the purists up in arms. Apple often shows blatant disregard for the set of Macintosh Human Interface Guidelines that they advise third-party developers to follow.

One example of this inconsistency is the zoom button. Unlike its maximise counterpart in Windows, the zoom button is supposed to change the size of the window to just contain the contents within, not the whole window. So if you open a Web page in Safari and hit the zoom button, Safari will not fill up the whole screen. It will be enlarged or shrunk to the exact size it needs to be to contain the Web page. But Mail will just maximise on hitting the zoom button. And iTunes actually shrinks to mini mode if you click on zoom. This is one of the biggest problems faced by new users of Mac OS X.

In Windows, you can drag any side or corner of a window in either direction to enlarge or shrink the windows. In Mac OS X, you can only use one handle at the lower right corner of all windows. This poses two problems. The first is that if there is no space on the right or below the window, you have to first drag it away from the edge and then enlarge it. The second is that you can never increase just one of the dimensions unless you either have precise control over the movement of the mouse or you like to do things really slowly. This is a little nag that shows Apple's absolutely stubborn attitude towards innovations made by Microsoft. While Microsoft happily embraces each and every innovative feature introduced by Apple, Apple has a hard time accepting that an idea occurred to the engineers at Microsoft that Apple could not come up with. This is the sole reason Apple had been supporting single button mice for a long time, even though it was pretty clear

that multi-button mice were much more useful. Even today, the Mighty Mouse has only one button, though it facilitates the use of multiple buttons by using touch sensors.

Now listen to this: there is no way to perform a cut and paste operation in Finder with the keyboard. Sounds unbelievable, right? There is an Edit menu in the menu bar; it has the Cut option and even the [Cmd] + [X] shortcut, but for some reason, it simply refuses to work. The only way to move a file from one folder to another is to drag it from here and drop it there. Though OS X makes this process relatively effortless with complete support for drag and drop and spring-loaded folders, keyboard junkies will find it sorely disappointing.

## 5.4 Security And Stability

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### 5.4.1 Security

What is the biggest annoyance on Windows? It is highly insecure and can be completely compromised if not taken care of religiously. What is the most convenient feature of a Mac? It is highly secure and you do not need to worry about anything. We will spell it out for you—Mac OS X has not had a single virus in the wild since its public release in 2001. It comes with a strong firewall and has always been and still stands tall as the most secure operating system out there. Some people point it out that this is due to the extremely low market share Macs have when compared to Windows. These same people also say that Macs will never gain any significant market share and will always remain the underdog. It does not take a genius to figure out that the combined lesson from both statements is that Macs will never suffer from the problem of viruses and malware. Basically, that's the end of the story, but we'll expound on it a bit more...

A lot of people claim that low market share is the only reason Macs have escaped the eyes of malicious hackers all this while, and that the security framework of Mac OS X is just as strong or weak

as Windows'. However, we can think of two controversies arising from this opinion. The first is, why wasn't it the same case with Mac OS 9? It had an even lower market share than Mac OS X has, and Windows was even less secure in the days of Windows 95 and 98. Why then did Mac OS 9 have a sizeable number of viruses out in the wild targeted and designed for it?

Another problem with the theory is the fact that Mac OS X has an immense number of applications designed for it. Sure, the amount of software available for the Mac platform is a far cry from the millions of applications available for Windows, but it is more than five per cent, which is Apple's share in the computer market. Both virus writers and software developers are essentially hackers who do it for the challenge of the job and the fame and money involved. How then is it justified that software developers see the Macintosh as a viable option to devote their efforts to while virus writers do not? The sole answer is that while it is very easy to write software for the Mac using Apple's excellent XCode developer tools, it is just as hard to write malicious code that can seriously damage Mac OS X.

But reasons matter little at the end of the day. What matters is that millions of Mac users around the globe are surfing the Internet and downloading files without any extra, protective software installed, and don't have to worry about the security of their computer, while Windows users are spending a lot of time and money keeping their computer up to date with anti-spyware, anti-adware and anti-virus software and their regular definition updates—and they are *still* suffering from security-related problems.

### 5.4.2 Stability

Macs are the only computers in the market that have a truly interwoven connection between the hardware and the software. Mac OS X knows everything about the hardware it is running on and Apple hardware best understands the needs of Mac OS X. The reason: both of them are developed and assembled under the same

roof. What this ensures is that there are no incompatibilities between the hardware and the software, which results in a rock-solid system. It is a pretty simple concept expertly implemented.

## 5.5 Advantages And Disadvantages

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### 5.5.1 Disadvantages

All Macs, with the exception of the Power Mac, offer the user an extremely limited scope of upgrading the machine. The only thing you can upgrade on them is the memory and storage. If you want an extra SuperDrive, you will have to do with an external one. If you want to upgrade to a better processor or graphics card, you'll need to buy a new machine. This is acceptable on laptops because laptops from other companies don't offer much scope for upgrading the machine either, but the fact that you cannot pop in a better processor in your iMac or Mac Mini once it is outdated acts as a strong deterrent for potential switchers.

### 5.5.2 Advantages

The first point has to be the competitive customer care Apple provides for their users. There have been a good number of cases where Apple did something to help a customer that was as unexpected as it was helpful. People send in their notebooks for small problems and Apple sometimes not only replaces them, but replaces them with the latest model of the product. They have a policy: if you purchase a new Mac and a revised version is launched within a month of purchase, Apple will replace your Mac with one of the newer models free of cost. They have a toll free number attended by people who actually know what they are talking about. Apple was the company that started the norm of giving a standard warranty of one year on their products at a time when all other companies gave a warranty of ninety days. AppleCare can also be extended to three years of complete support over the phone and onsite troubleshooting.

In a shootout of laptops, we had this to say about the Apple PowerBook—"The Apple PowerBook G4 was in a league of its own.

It is the ultimate in style, and is a laptop with an attitude. If you are searching for a laptop to brag about without a platform in mind, your search ends here. This is *the* laptop for you-period! If you're out to make a point and re-affirm to the world that you're no mere mortal, go get one of these!" This given you an idea of the status Macs occupy in the world of technology.

Apple has been winning various design awards year over year for a long time and if you look at their product line-up, it is clear that they deserve all the praise showered upon them and more. Whether it be the compact and simple design of the Mac Mini, the sleek look of the MacBooks, the shiny metal of the pro notebooks, the imposing structure of the Mac Pro, or the all-in-one, minimalist design of the iMac—they all exude pure elegance and class.

The biggest single advantage Apple enjoys over other hardware vendors is undoubtedly Mac OS X. It is the leverage that allows Apple to sell their hardware at comparatively high prices. It is the entire reason why most people stick to Apple, why Apple has a cult following. The Mac OS is not something that can be explained in a few pages, it has to be used to fully appreciate it. We encourage all of you to go to your nearest Apple Authorised Reseller and ask for a demo. Most probably, you'll be treated to an enthusiastic run-down of all the greatest features in Mac OS X, and you can sit at the store and use a Mac for a while to get a feel for the operating system.

## 5.6 Leopard

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Apple boldly proclaims that they will be “advancing the world’s most advanced operating system” with Leopard. Vista is already out and it has a beautiful new interface, integrated search, applications like Windows Photo Gallery, DVD Maker, Media Center, etc., a graphics subsystem similar to Apple’s Quartz Extreme, and a lot more features. It basically includes almost all the features that Mac OS X had and XP was lacking. But it brings

little new to the table. Apple, however, is hard at work on Leopard at present and it is widely expected that it will leave Windows Vista biting the dust.

When Steve Jobs gave a preview of ten features that would be included in Leopard at WWDC 2006 (World Wide Developers' Conference), he started off by saying that there was some stuff in Leopard he could not reveal. "There are some 'top secret' features to Leopard that we're going to keep a little close to the vest and not going to show you today; we just want you to know they are there! We don't want our friends (*clearly referring to Microsoft*) to start their photocopiers any sooner than they have to and so we're going to keep a few things a little secret." Let's hope these top secret features turn out to be worthy of the hype around them. Here's a rundown of the ten features we know are definitely going to be there in Leopard.

### 5.6.1 64-bit Applications

The first feature of Leopard is support for 64-bit applications. In Tiger, there was support for 64-bit at the UNIX layer and that means that the Mac Pros ship with support for UNIX, because those Mac Pros are based on a 64-bit Intel architecture. But in Leopard, this support will be taken a giant leap forward. The 64-bit support is going to be extended all the way up through the UI frameworks, Carbon and Cocoa, right to the applications. This means, in Leopard, there will be fully native 64-bit UI Carbon and Cocoa applications. And this will be done in a completely 32-bit compatible way. So the same frameworks that support 32-bit will also support 64-bit. That means 32-bit applications can be run side by side with 64-bit applications. None of these applications will be emulated or translated; they will all run natively. There will be full 64-bit support, top to bottom.

### 5.6.2 Time Machine

Time Machine will automatically back up your Mac. So if your hard drive dies, you can buy a new hard drive, put it in your machine and be right where you were before that hard drive died.



Time machine acts as a time-based browser

On top of this, you can restore à la carte. So if there's one file that you are missing, you can go and restore just that one item. It allows you to back up to a hard drive or a server. You can plug in an external hard drive; it will automatically notice the hard drive, configure it automatically, and start backing up your machine. But the coolest part about Time Machine and the reason it is named as such is because it backs up and restores your files in a whole new way. Its time-based browser allows you to see a snapshot of what your entire system looked like on any given day—file by file. When you find the file you want, just select it and restore it. You can do the same with a group of files, whole folders, even your entire system.

### 5.6.3 Complete Package

The third feature is that Apple is going to deliver the complete package. They've got some software that's out there in beta form right now and they've got other applications they only ship on new Macs, that haven't been available to the installed base. And they're going to ship all of those as part of Leopard. The first one is Boot Camp. It is software that allows Windows on a Mac; you can go and buy a copy of Windows and run it on your Intel-based Mac. And the reaction to this has been very strong, "Hell froze over. Pigs

flew.” (Michelle Kessler and Jefferson Graham, USA Today.) Ever since Apple put Boot Camp out for beta, there have been over half a million downloads. They are finishing up with Boot Camp and it is going to ship as part of Leopard. Another application that Apple ships on some of their new Macs is Front Row. It gives you access to all your media—your photos, music, videos—from across the room sitting on your couch. The next generation of Front Row is going to be built into Leopard. Another example is Photo Booth. Apple ships it on their new Macs that have the video cameras built-in. They are going to build the next generation of Photo Booth into Leopard and they’ve expanded the range of cameras it works with so everybody can have fun with it. These are just three examples of how they are going to ship the complete package of applications they have with Leopard.

### 5.6.4 Spaces

If you always do a bunch of things on your computer, you’ve got a lot of applications running at once and yet, the tasks you are doing each require a few applications together. You can now take those few applications required for a given task and create a “space” for them to be in. Another task has its own space with its collection of applications and you will be able to rapidly switch



Spaces is a new way of working on Macs



between those as and when you wish to. If you are tech-savvy, you must have realised what this means. Apple is building the capability to handle multiple virtual desktops into Leopard with the kind of great user interface that they are famous for.

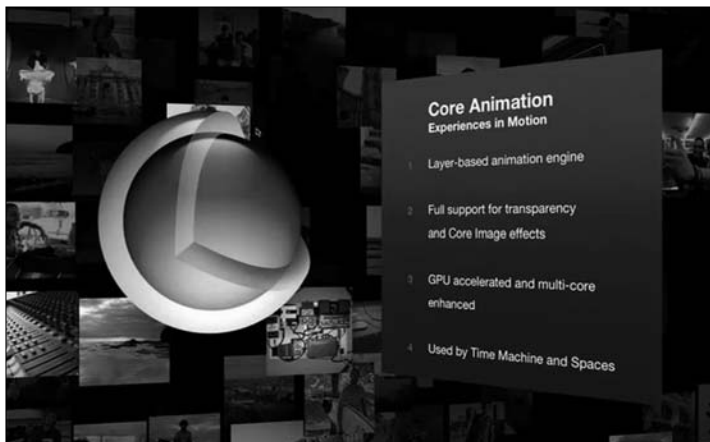
### 5.6.5 Spotlight

Spotlight was one of the great features of Tiger. It allows you to instantly search for any file on your machine by file name, metadata, contents, and all sorts of things. Apple is going to make Spotlight even better in Leopard. First thing they are going to do is enable you to use Spotlight to search other machines on your network that are sharing files with you. If you have the permissions to see the files, you will now have the ability to search them. They are also adding the ability to search servers, so in the office, if you have a workgroup server with all the shared assets, then you can search that workgroup server from the comfort of your desk.

Apple is also adding advanced search syntax that will enable you to search files using Boolean operations and specify the file-type right in the search query. They are also going to take some of the powerful search features they had in Finder in Tiger and put them right into the Spotlight window as well. They are going to make Spotlight a great application launcher. You can type one or two letters, and hit Return—and your application is launched. And they are adding recent items to Spotlight. So when you bring up that Spotlight window, it will be pre-populated with all the recent things you've been doing—recent photos, spreadsheets, PDFs, presentations, applications. Often, therefore, what you're looking for is right there without even doing a search.

### 5.6.6 Core Animation

In Cheetah, Apple introduced Core Audio. In Tiger, they introduced both Core Image and Core Video; and these three core technologies together enable developers to easily build media rich capabilities into their applications. Now, in Leopard, they are introducing Core Animation. Core Animation allows devel-



Core Animation will enable even richer applications for OS X

opers to increase the production values of their applications. Time Machine was built using Core Animation. It “opens up the power of Apple’s graphics technologies and proven interface aesthetics to every developer. Look for whiz-bang visual effects in an upcoming crop of scientific visualization tools, media organizers, and whatever else you can dream of.”

### 5.6.7 Universal Access

“Mac OS X is so great that we want everybody to have a chance to use it and that includes people with special needs,” said Jobs when he talked about the seventh feature of Leopard. So Apple is focusing a lot on Universal Access for Leopard. They’ve got some major enhancements to VoiceOver, a technology they introduced in Tiger which is really important. They are adding Braille support, closed-captioning support in QuickTime, and have got some faster and better ways to navigate around the whole system. So a lot of work is going in to Universal Access. The new synthesized English voice in Leopard, Alex, uses advanced, patented Apple technologies that deliver natural intonation, even at very fast speaking rates. Alex works with any application that supports Apple’s speech synthesis.

## 5.6.8 Mail

Apple is making some enhancements to Mail for Leopard. They are adding Stationery, Notes, To-Dos and RSS support. Stationery refers to a lot of templates that will be bundled in the application and can be applied to any e-mail you send. You can add media to the pre-defined templates to personalise them, or you can make your own templates. Apple promises that Mail will only use industry-standard HTML code to compose the e-mails so that it will be viewed in the same format in most other e-mail clients and Web-based mail accounts. The second thing is notes. Mail will have a better way to make notes to yourself; it will have a special message type that doesn't get lost among the others. You can type notes in a special message type and they show up in your inbox. There's also a special mailbox called "Notes," which aggregates them all together so you can browse through just your notes.

You will be able to select something and make it a to-do. You can set priorities, due dates, and alarms for these things. It won't be just Mail either. There will be a to-do service throughout Leopard and any application can tie into it. Any application can contribute and view to-dos. iCal is tied into this, so you make a to-do in Mail and you're going to see it in iCal and vice-versa. All third



Mail's Stationery refers to a lot of templates

party applications can tie into this and have one system-wide to-do service where everything is kept track of. There will also be support for RSS in the next version of Mail. It is kind of confusing though. There already is RSS support in Safari, so if Apple added the functionality to Mail too, you are going to have two applications on OS X by default that do different things, but both have support for RSS. Our guess is that the next version of Safari will do away with support for RSS.

### 5.6.9 Dashboard

Dashboard is one of the absolute favourite features of Tiger for most users. The reason Dashboard has been so great is not only because Apple supplied a good set of starter widgets but because all the developers and users have built so many other fantastic widgets. Apple announced two new features for Dashboard: the first is a feature for developers and the second one for end-users. They announced a new developer tool called Dashcode. It helps you design, develop, and debug your Dashboard widgets. It has a set of templates, which are pre-canned widgets with all the HTML, CSS, and JavaScript you need, and all you do is take and modify them slightly to produce the widget you're looking for. It has templates for countdown, RSS, podcast, photocast, Quartz Composer, daily feed, gauge and custom widgets. Dashcode is also a visual editor for HTML and CSS. So instead of editing the HTML in a text document, you visually lay it out, set the colours, size and everything else and it will produce the HTML and CSS for you. It also ships with a rich Quartz library, so you have everything from search fields to buttons to controls, you drag those out—it has all the JavaScript for those—put it in your widget and you're done. It has a nice JavaScript editor and a full JavaScript debugger.

The next feature, the one for the user, is called Web Clip. Apple has come up with a way where anyone can turn any part of any Web page into a widget. Just visit your favourite site and click the “Open in Dashboard” button in Safari. Dashboard launches a new clip of the site in a customisable widget. From there, you can resize your Web Clip and choose from a handful of window

themes. And since your Web Clip is always live, it acts just like the Web site it was clipped from.

### 5.6.10 iChat

The next version of iChat is going to have some heavily-requested features as well as a set of accessories that would be more of a novelty than anything else. There are going to be multiple logins, invisibility, animated buddy icons, video recording, and tabbed chats. As an example of tabbed chats, if you've got five message sessions going, you can just consolidate them into one with the tabs on the left. A lot of Macs now have inbuilt video cameras, so you get videoconferencing right out of the box. They are adding some Photo Booth effects to video conferencing. The second thing, a little more serious than the first, is called iChat Theater. With the help of this feature, you can show a slideshow to someone over a chat session or talk to them through a Keynote (Apple's version of PowerPoint) presentation. And they are adding Backdrops. Set the scene for a chat with video backdrops in iChat. Drag and drop a picture or video from iPhoto, iMovie, or the Finder into the video preview window to create a backdrop that might fool your buddies (if they are vision-impaired!) into thinking you're chatting from your living room,



22 Set the scene for a chat with video backdrops in iChat copy copy

the beach, or the moon. Even buddies who don't have Leopard will see your backdrop.

## 5.7 The Beginner's Guide To Automator

Introduced with Tiger, Automator is a simple yet powerful tool that can get repetitive tasks done with absolutely no knowledge of complex scripting or programming languages.

Before Automator, Mac users had either to learn AppleScript, which while simple still had that complex programming feel to it. One had to remember procedures, properties and other programming elements. While AppleScript is much more powerful than Automator, it left the average Mac user in the dark.

Taking the essence of the Mac OS, simplicity, Automator makes creating and putting to practice repetitive tasks as simple as dragging and dropping actions into a easy to understand workflow. Right from the simple task of converting file formats to advanced



The Automator workspace

workflows such as running full blown maintenance tasks.

What that takes hours can be done within seconds. What's more, Automator gives you direct access to the powerful technologies like Core Image, Core Audio, Spotlight which are otherwise not accessible to the average user. This gives Automator the power to process thousands of images, files and folders quickly.

What's more, Automator is dumbed down, so it's not restricted to the geeks. It automatically detects if original files are being overwritten and offers to insert a copy command. It narrows down actions by means of relevance, for instance, it will not show the "Burn to DVD" action as relevant if the current step is "Compose New Mail". Automator also marks as action in a workflow red if it finds that the actions are not compatible with each other.



Use the integrated Spotlight search to narrow down your options

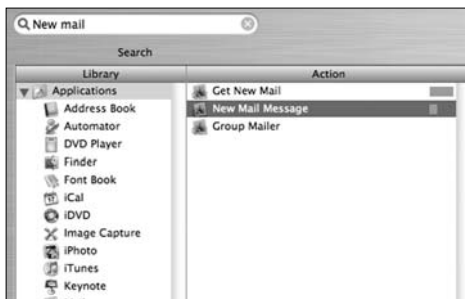
### 5.7.1 Automator Explained

Creating a workflow in Automator, as mentioned before, is easy as drag and drop. Just drag actions from the Action pane to the workflow area to create a seamless workflow. Actions can be narrowed down by the integrated Spotlight search or clicking on an application group from the Library window.

To explain this better, let's make a workflow that will copy all documents edited within the week, compress to an archive, and e-mail them to a specified address.

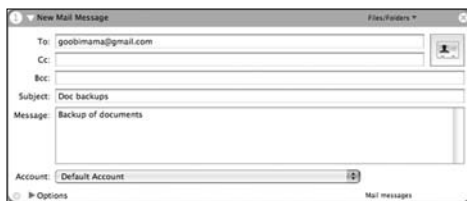
#### Step 1:

First, we need to keep an open e-mail ready with all the details. Simply typing new mail in the search bar narrows it down to the "New Mail Message" action. There is a relevance bar that acts as a guide to what action to choose.



Get to the "New Mail" action

Dragging it into the workflow area expands it to a new message form.



Create the new mail message with all details

### Step 2:

The next step is to get all documents edited within a week. And what better tool to do this than Tiger's excellent search tool, Spotlight. Clicking on Spotlight in the Library tab shows all the actions under Spotlight. Search for .doc shows all results under documents.

### Step 3:

The rest of the actions are very straightforward as seen in the screenshot.

- Copy items to a different folder to prevent overwriting
- Create an archive of the files
- Add the attachments to the email message previously created
- And finally send the outgoing messages.

As simple as that.

What's more, Automator has a warning system in case the actions in the workflow aren't compatible with each other.

### Step 4:

If one needs this workflow on a per-use basis, replace the "Spotlight" action with the "Get Selected Finder Items" action. The saved workflow then needs to be placed in ~/Library/Workflows for easy right-click access.



The completed workflow

## 5.7.2 Creating Actions

While the default set of actions is more than enough for most tasks, the real power of Automator is unleashed while creating an



action. This is because at the heart of an Automator action is AppleScript! That means that any application that's scriptable can have its own set of Automator actions. Combined with AppleScript, imagination (and skill, of course) is the limit to what Automator can do. For example, one can have a unique set of custom written actions for doing routine tasks in Photoshop!



Using Automator workflows within Finder

While the creating of such actions is beyond the scope of this article as it requires intricate knowledge of AppleScript, we shall look at some of the popular custom actions and workflows based thereon.

Actions can be found on Apple's Automator download section (<http://www.apple.com/downloads/macosex/automator.html>) as well as on independent sites like Automator World (<http://automatorworld.com/>) and Automator.us. Some of our favourites:

### Photoshop CS Automator Actions 3.5

Now here's a comprehensive collection of 86 actions specially scripted for Adobe's Photoshop. From adding layers, rendering clouds, blurs, to adding graphic watermarks for all your digital images. And since Automator's actions are independent of the application, one automates the entire process of processing images to burning them to DVDs or publishing them to the Web.

### Upload to Flickr 1.0 / Imageshack Uploader

A very simple action, but extremely useful nonetheless. This uploads images to the Flickr web photo storage service or Imageshack respectively.

### **Microsoft Office Automator Actions 1.0.1**

Microsoft Office needs no introduction, but Automator has no actions for this office productivity suite. This set of over 80 actions for MS Word, Excel and PowerPoint. Some of the actions are Set Text of Microsoft Word Document, Set View Type of Word Document, Word Document to PowerPoint, Calculate Areas in Excel, etc.

### **Podcast Actions**

Podcasting has become very popular these days and along with that comes the podcast actions. Four actions designed to aid in podcast creation. It's almost a complete workflow as it exports from GarageBand, converts the audio to MPEG, creates a podcast feed and generates a text file which can be used for creating RSS feeds...

## **5.7.2 Popular Automator Workflows**

Automator workflows are all over the internet. Again, sites like [automatorworld.com](http://automatorworld.com) and Apple's own Automator download page are excellent resources for user specific workflows. But there are even more smaller sites like a blog which have some interesting workflows. A simple google search should provide for enough of such sites.

### **Maintenance 3.6**

The Mac OS by itself does not really need maintenance. It has the tendency to run without slowdown for years together performing tasks like updating prebindings and disk optimization on its own. However, there are a few tools for maintenance, and some of them include digging into the Terminal. The Maintenance 3.6 workflow runs a series of system maintenance scripts via the Terminal which repairs disk permissions, surface scanning and updates pre-bindings, which are links between the applications and their needed system libraries which can improve launch times as well as preventing program crashes, among other things.

### **Incremental Folder Backup 1.0**

This action mounts a disk image and copies a specified folder onto it. The backup is enclosed within a folder labelled with the

date and time. Useful for taking a ‘snap shot’ of a folder whilst working on a project.

### **Batch Rename**

This is a very simple but useful workflow. It renames the selected files (or files in the selected folders) based on user-set preferences.

### **5.7.3 Common Automator Scenarios**

So how big a part can Automator play in a regular Mac users life? Take for example, a Photographer. Say he needs to run some specific tasks on photographs taken by a particular camera. He can use the spotlight action to locate photographs taken by that camera model, open them in photoshop, alter them, and save them to a new location, all done without any interaction on his part.

Or if you want to wake up to your favourite songs. One can create a workflow to get songs, set the iTunes volume and equalizer, add them to a playlist and lastly, start the iTunes visualizer. Set this workflow to open from iCal to start the alarm a specific date or even everyday.

A person who cannot be at his desk all day but has an iPod, can combine his new unread emails into a text file and export them to his iPod for reading on the go.

### **5.7.4 Automator In Leopard.**

With Apple’s upcoming OS, Leopard, Automator is given a boost both in terms of power and added simplicity. Automator also adds more actions and includes smart folders such as “Most used” or “Recently added” for organising scripts.

### **Recording Functions**

Automator, in Leopard, will be able to automate any application. This is possible with the new recording function. Simply click on the Record button in automator and demonstrate the task which

automator will interpret as a workflow. This can of course be played back as many times as needed. One can even edit what was recorded to refine the automation.

### Starting points

Automator has simplified the process of creating workflows by offering a series of starting points like “working with photos” or “working with files and folders”. The starting point will guide the rest of the workflow.

# The Switcher's Guide



**M**ac OS X and Windows have many of the same components, though some of the names are different. Switchers may be unfamiliar with where things are located. This chapter will help you get acquainted with Mac OS X

## 6.1 The Mac OS X Desktop

When Mac OS X is started for the first time, you'll see something similar to the image below on the screen.

### The Main Mac OS X Screen Elements

- The menu bar for the active application appears at the top of the screen.
- The Dock appears at the bottom of the screen.
- Windows appear anywhere on the screen. The picture on the right shows a Finder window.



The Mac OS X Desktop

- The Desktop appears behind all windows.

The following sections provide more information about each of these elements. You will discover these and similar elements in all the Mac OS X applications you use.

### 6.1.1 The Menu Bar



The Menu Bar is the Apple's equivalent of the Windows Task bar

The menu bar provides commands that are used to perform tasks.

Here's a quick run-down of the menu bar from left to right:

- The Apple menu at the left is always available. It provides commands for changing many computer-wide settings, updating Apple software, and shutting down the computer.
- Next are the menus for the active application, starting with the application menu, which shows the name of the application in bold. Applications have many of the same menus, such

as the File menu, and many commands in the menus are the same, such as New in the File menu. A good way to start learning how to use an application is to try each menu command to see what it does.

- Status menu icons, such as the volume icon, appear at the right of the menu bar. On clicking a status menu icon, you'll see commands or additional information related to the icon. Status menu icons can be added or removed in System Preferences panes and some applications, such as iChat.
- At the far right of the menu bar is the Spotlight menu. Click the Spotlight menu icon and type a word or two for something you want to find.

### 6.1.2 The Dock



Apple's Dock gives you quick access to commonly used applications

The Dock usually appears at the bottom of the screen with icons for applications used frequently. To open an application, just click its icon in the Dock.

- The Finder is the first icon at the left of the Dock. Click it to start Finder.
- Application icons appear between the Finder icon and the bar. A black triangle shows an application is open. Some application icons in the Dock show status information. For example, the Mail icon shows the number of unread messages it has.
- The bar separates applications from other items in the Dock. It can be dragged to change the size of the Dock.
- Icons for folders and documents appear to the right of the bar. If you add a folder to the Dock, you can press it to see a list of items in the folder, then choose the one you want to open.
- The Trash is used to delete files. Just drag files to the Trash then choose Empty Trash from the Finder menu. To see what's in the Trash, click its icon.
- To add an item to the Dock, drag it to the Dock. You can add applications, files, folders, servers, Web sites, and more.
- The Dock can be customised in many ways, including its size and position. Open System Preferences, then click Dock to customize the Dock.

### 6.1.3 Finder Windows

Finder windows are used to organise documents and applications. Finder windows have many features found in windows throughout Mac OS X. To open a Finder window, choose **File > New Finder Window**.



Finder can be considered to be like Windows Explorer

- The title bar at the top of the window shows the name of the folder being viewed. To move a window, move the pointer over the title bar and hold down the mouse button, then drag the mouse.
- The three buttons in the top left corner of the title bar let you close, minimise, and zoom the window. The button in the top right corner hides or shows the window's toolbar and sidebar, if it has one.
- The toolbar below the title bar provides buttons and other items to perform actions on the contents of the window. In the Finder window toolbar, the group of three buttons let you select icon, list, or column view. Type text in the search field to find your documents.
- The sidebar at the left of the Finder window shows disks and folders. Smart Folders and Burn Folders can also be added to the Finder window sidebar.
- Sometimes, at the right and bottom of a window, you'll see scroll bars. These can be dragged to see items that are not currently visible in the window.
- The bottom-right corner of many windows can be dragged to change the size of the window.

### 6.1.4 The Desktop

The Desktop is the area behind all the windows. It's a convenient place to put files and folders until you have a chance to organise them. Here are some other useful things to know about the desktop.



- The Desktop is part of the Finder. Clicking on the desktop makes the Finder active at any time.
- Each user account created on a Mac has an individual desktop. To see the contents of the Desktop in a Finder window, open the home folder, then click Desktop.
- The Desktop background picture can be changed. Open System Preferences and click Desktop & Screen Saver.

### 6.1.5 How Is The Disk Organised?

Mac OS X is organised to help the user find things quickly and easily. The Finder window sidebar provides a convenient place to start understanding how the disk is organised.

- The top area of the sidebar shows disks. One of the disks is the startup disk, the disk with the Mac OS X software. If a Mac's disk has been divided into separate sections, called "volumes" or "partitions," you will see them as well. You will also see other disks, CDs, and DVDs being used.
- If a Mac is connected to a network, you can click Network in the sidebar to locate servers and other computers on the network.
- On turning iDisk syncing ON in .Mac preferences, the iDisk appears in the top area of the sidebar.
- Most Mac OS X applications are in the Applications folder on the startup disk. Clicking on the Applications icon in the sidebar opens this folder.
- Each user has a "home" folder, a convenient and private place to keep their personal files and software. It can be seen in the sidebar.
- Inside a home folder, there are folders named Documents, Movies, Music, and Pictures, to hold the user's personal files. Other folders can be created to organise files any way the user likes. To create a new folder, choose **File > New Folder**. To put a file in a folder, drag the file.
- If Personal File Sharing is turned on (in Sharing preferences) and the Mac is on a network, the Public folder in the home folder is available to other users on the network. It can be used to exchange files with them.
- The Library folder in the home folder contains fonts and other



Disk  
organisation

software for personal use. On clicking the icon for the startup disk in the sidebar, you'll see another Library folder that contains similar files for every user on the Mac.

- All the home folders on a Mac are in a folder named Users. Clicking the startup disk icon allows you to see the folder. In the Users folder there is also a folder named Shared. All the users of a Mac can use this folder to exchange files.

## 6.2 Where Are The Applications?

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OS X includes many applications to help the user get started quickly and easily using a Mac.

Many frequently-used applications can be found in the Dock, and you can add applications to the Dock whenever you want. You can also open the most recently-used applications and documents by choosing the Recent Items command in the Apple menu.

The applications are in the Applications folder. Additional applications can be found in the Utilities folder (in the Applications folder).

Applications may change because Apple frequently distributes updated and new software. Here's a list of some of the Mac OS X applications:

### **Address Book**

To keep the names, addresses, and telephone numbers for all the contacts on a Mac.

### **Automator**

To create workflows that can automate tasks which you perform repeatedly.

### **Dashboard**

To access a score of nifty mini-applications including Calculator, World Clock, Calendar, Weather, Phone Book, Stickies, Stocks, and many more.

**Dictionary**

To look up words to check their spelling, meaning, and usage.

**DVD Player**

To play DVD movies.

**Font Book**

To see the different type faces of the fonts available on a Mac, set up font collections, and manage fonts.

**iCal**

To keep track of important dates, meetings, and appointments.

**iChat**

To send text messages, talk long distance for free, or chat in a full-screen personal videoconference.

**iLife**

The iLife suite of integrated applications can be used to make music, produce movies, create digital photo slideshows, burn DVDs, and more.

The suite includes GarageBand, iPhoto, iMovie, iDVD, and iTunes.

**Internet Connect**

To dial an ISP, establish a PPP connection over Ethernet (PPPoE), connect to an AirPort network, or have an AirPort Base Station connect to the Internet.

**iSync**

To synchronise contact, calendar, and other information between a Mac, a cell phone, a PDA, and an iPod.

**Mail**

To send and receive e-mail with friends, family, and business associates.

## 6.3 What's It Called On A Mac?

A Mac and Mac OS X include many of the same capabilities as a Windows computer. If you're not sure what it's on the Mac, here's a list of Windows and Mac terms to help you find what you're looking for:

| Windows Term            | Mac term                                  | Use   |
|-------------------------|---|---|
| Accessories             | Dashboard widgets, Utilities Applications | Dashboard includes a calculator, notepad, address book, and clock widget. You'll find similar applications in the Applications folder and the Utilities folder (which is in the Applications folder).   |
| Alt key                 | Option key                                | Used to modify keys and enter special characters such as "é".   |
| Close box               | Close button                              | Closes a window when you click it. It's the left most button of the three buttons located in the upper-left corner of the window.   |
| Control key             | Command key                               | Used to perform actions or shortcuts. For example, pressing <b>[Command] + [S]</b> usually saves a document or file.  |
| Control Panel           | System Preferences                        | Used to select system settings such as your desktop background. To open System Preferences, choose <b>Apple menu &gt; System Preferences</b> .  |
| Device Manager          | System Profiler                           | Get detailed information about your computer hardware and software. Choose <b>Apple menu &gt; About This Mac</b> and click More Info.   |
| Disk drive eject button | Media Eject key                           | To open and close the optical drive, press the Media Eject key on your keyboard. To eject disks in other types of drives, (or if your keyboard doesn't have the Media Eject key,) select the disk in the Finder and choose <b>File &gt; Eject</b> . |

## What's It Called On A Mac? (contd.)

| Windows Term              | Mac term                         | Use   |
|---------------------------|----------------------------------|---|
| Exit                      | Quit                             | Choose Quit from the application menu to exit an application. (The application menu is labelled with your application's name.)  |
| Windows Photo Gallery     | iPhoto                           | Use iPhoto to download photos from your digital camera and create your own photo albums.  |
| (My) Computer             | Desktop                          | Sometimes refers to the Mac OS X work environment. Also used to refer to background behind all the windows. You can keep documents and other icons on your desktop.   |
| (My) Recent Documents     | Recent Items (in the Apple menu) | As you open applications and files, their names are kept in the Recent Items submenu of the Apple menu. You can use this submenu to quickly reopen applications and documents.<br><br>Many applications include an Open Recent command in the File menu that lists documents you have worked on recently. |
| Network Connections       | Network Preferences              | Use the Network pane of System Preferences to configure your network settings. For help setting up or solving network problems, click "Assist me".  |
| Performance control panel | Activity Monitor                 | See how your computer is performing and which processes it's running.   |
| Program Files             | Applications folder              | The Applications folder holds Mac OS X applications and utilities.  |
| Properties                | Get Info                         | In the Finder, select a file, folder, disk, server, or other item, then choose <b>File &gt; Get Info</b> to see infor-  |

|                        |                      |   |
|------------------------|----------------------|---|
|                        |                      | <p>mation about it. You set ownership and permissions for the item. For files, you can select the application you want to open the file.</p>  |
| Recycle Bin            | Trash (in the Dock)  | <p>Drag files and folders to the Trash icon in the Dock to delete them. To permanently delete the files, choose <b>File &gt; Empty Trash</b>.</p>   |
| Snipping Tool          | Grab                 | <p>Use Grab to take a picture of the screen. You can also take pictures of the screen by using Preview.</p>   |
| Live Search            | Spotlight (and more) | <p>Click the Spotlight (magnifying glass) icon at the right of the menu bar and enter search text to find files, documents, applications, email, and other items on your Mac.</p> <p>Many applications, such as the Finder, Mail, and Address Book provide a search field in the toolbar where you can quickly search for items.</p> <p>In Safari, use Google search to find Internet websites.</p> <p>Use Sherlock to search for information on the Internet .</p> |
| Shortcuts              | Alias                | <p>To make an alias, select the file or application and choose <b>File &gt; Make Alias</b>.</p>   |
| Start Menu and Taskbar | Dock                 | <p>Use the Dock to open your favourite applications, files, folders, and Internet websites. By default, the Dock appears at the bottom of the screen. Drag items here to add them to the Dock.</p>  |

|                      |                            |   |
|----------------------|----------------------------|---|
| Status icons         | Status menus               | Status menus appear as icons at the right of the menu bar. Use status menus to start connections, check the status of portable's battery, and change your iChat status.   |
| Windows Explorer     | Finder                     | Use the Finder organize your files, applications, and other software. To open a Finder window, click the desktop and choose <b>File &gt; New Finder Window</b> .  |
| Windows Media Player | QuickTime Player<br>iTunes | Use QuickTime Player to enjoy many types of movies and audio. QuickTime is also available to Safari and other Web browsers so you can enjoy media on the Internet.<br><br>Use iTunes to listen to music CDs and create your own personal digital music library. |
| Windows Movie Maker  | iMovie                     | Use iMovie to download video from your digital video camera and create your own movies.   |

## Preview

To open images and Portable Document Format (PDF) documents. Preview documents before printing them.

## QuickTime Player















To play movies and music on a Mac.

## Safari

To browse the Web. It's easy to import favourite bookmarks from Microsoft Internet Explorer.

## 6.4 Keyboard Shortcuts

Mac OS X uses certain menu symbols to denote various keys on the keyboard. Using a combination of those keys would invoke that particular menu function. Here is a legend that list all the menu symbols used in Mac OS X and their corresponding keys on the keyboard.

| Symbol  | Key on Keyboard        | Symbol  | Key on Keyboard |
|---|------------------------|---|-----------------|
|  | Command (or Apple key) |  | Delete          |
|  | Option                 |  | Escape          |
|  | Shift                  |  | Page Up         |
|  | Control                |  | Page Down       |
|  | Tab                    |  | Home            |
|  | Return                 |  | End             |
|  | Enter (on Number Pad)  |  | Arrow Keys      |

Keyboard shortcuts in Mac OS X

For a comprehensive list of the shortcuts use throughout Mac OS X, visit these pages:

<http://docs.info.apple.com/article.html?artnum=75459>  
[www.danrodney.com/mac/index.html](http://www.danrodney.com/mac/index.html)

## 6.5 Moving Windows Files To A Mac

You may have files and settings on a Windows computer that you want to use on a Macintosh. To get the information from a Windows computer to a Mac, you can connect the computers directly or connect them over a network. You can also copy files from the Windows computer to an intermediary location such as a remote server, CD, or external hard disk, then copy the files from there to a Macintosh. Read on for more information on connecting computers and transferring Windows files to a Mac.

Detto Technologies' Move2Mac software provides an easy way to move files and settings to a Mac. Move2Mac transfers files from a Windows computer and automatically puts them in the appro-



priate places on a Mac. It includes a special USB cable and instructions for preparing special files for use on a Mac.

### 6.5.1 Connecting To Windows PCs And Servers From A Mac

You can connect to Windows computers and servers on your network from a Mac.

To locate and connect to Windows computers on a network, you can use the Network browser in the Finder.

If you cannot locate the Windows computer in the Network browser, you may be able to connect to it using the Connect To Server dialog in the Finder.

To locate the Windows computer, you need to know the workgroup name for the computer and the network name (called the “computer name”) for the computer. To connect to the computer, you also need a username and password and the name of the shared folder you want to access. If you don’t have this information, contact the person who owns the computer, or your network administrator.

1 In the Finder, choose **Go > Connect to Server**.

2 Type the network address for the computer in the Server Address text box using one of these formats:

**smb://DNSname/sharename**

**smb://IPaddress/sharename**

3 Follow the onscreen instructions to type the workgroup name and a username and password, and choose the shared folder you want to access.

If you connect to the shared folder using Connect to Server, its icon may appear in the Finder window sidebar or on the Desktop.

### 6.5.2 Connecting A Mac Directly To A Windows Computer

If a Windows PC is equipped with an Ethernet port, you can connect the PC and a Macintosh using an Ethernet cable. By doing this, you are creating a small local network, consisting of just the two computers. Set up the Windows PC by turning on File Sharing.

Refer to the instructions that came with the Windows PC if you're not sure how to do this.

To locate and connect to the Windows computer, you can use the Network browser in the Finder. You need to know the workgroup name for the computer and the network name (called the "computer name") for the computer. To connect to the computer, you also need a username and password and the name of the shared folder you want to access. If you don't have this information, contact the person who owns the computer or your network administrator.

If you cannot locate the Windows computer in the Network browser, you may be able to connect to it using the Connect To Server dialog in the Finder.

- 1 In the Finder, choose **Go > Connect to Server**.
- 2 Type the network address for the computer in the Server Address text box using one of these formats:  
**smb://DNSname/sharename**  
**smb://IPaddress/sharename**
- 3 Follow the onscreen instructions to type the workgroup name and a user name and password, and choose the shared folder you want to access.

If you connect to the shared folder using Connect to Server, its icon may appear in the Finder window sidebar or on the desktop.

### 6.5.3 Transferring Files From A Windows Computer

Follow these instructions to transfer files from a Windows computer to a CD or external hard disk, and then transfer them to a Mac.

**To transfer files from a Windows PC:**

- 1 On the Windows computer, create a folder to hold the files.
- 2 Select the folder that contains the files you want to transfer, and choose **Edit > Copy**.

Most of your files will be in the (My) Documents folder, which you can open by choosing **Start > (My) Documents**. However, you can use this process to transfer files that are anywhere on the computer.

- 3 Click the new folder you created in Step 1, then choose **Edit >**

**Paste.** Repeat steps 2 and 3 for any other folder that contains files you want to transfer.

- 4 Copy the folder containing the files to transfer to a Macintosh. To copy the folder, either connect the Windows computer and the Macintosh over a network, or copy the folder to an intermediary location such as an external hard disk or remote server. If the Windows computer supports it, you can also burn a CD or DVD with the folder.

Once you've copied the folder with the files to a Macintosh, you can place them in the Documents folder. To do so, choose **Go > Home** in the Finder. Open the transfer folder, and choose **Edit > Select All**. Drag the contents of the transfer folder to the Documents folder (in the home folder).

If any of those files are songs, you can import the music into iTunes. To do so, open iTunes by clicking the iTunes icon in the Dock. Drag the folder that contains the music to the iTunes window. iTunes will copy the songs to the iTunes Library.

You can also import the photos among those files into iPhoto. To do so, open iPhoto by clicking the iPhoto icon in the Dock. Choose **File > Import**, and then select the transfer folder.

### 6.5.4 Transferring The Address Book From A Windows PC

The way you transfer an address book or contact information from a Windows computer to a Macintosh depends on the Macintosh application you intend to use. Some applications let you import contact information in specific formats. Address Book lets you import vCards, LDIF, and text (tab-delimited and comma-separated) files. Use an e-mail or address book application on a Windows computer to export the contact information in the appropriate format. You can then transfer the file from the Windows computer to a Macintosh and import the contact information.

If you use Windows Mail (formerly known as Outlook Express on XP) on the Windows computer, you can transfer the

contact information to Mac OS X Address Book by following the instructions below.

**To export your contact information from Windows Mail:**

- 1 On the Windows computer, create a folder to hold the exported addresses.
- 2 Open Windows Mail.
- 3 Choose **Tools > Address Book**.
- 4 Choose **Edit > Select All**.
- 5 Drag the selected addresses to the folder you created.
- 6 Transfer the folder of addresses to the Macintosh.

To transfer the folder, either connect the Windows computer and the Macintosh over a network, or copy the folder to an intermediary location such as an external hard disk or remote server. If the Windows computer supports it, you can also burn a CD or DVD with the folder. Once you've copied the folder with the addresses to the Macintosh computer, you can import them into Address Book. To do so, open Address Book (in the Applications folder). Choose **File > Import > vCards**. Select the addresses you're importing and click Open.

## 6.6 Using Windows Files On A Mac

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The most popular Mac applications use the exact same file formats as their Windows counterparts, making it easy to open and use files created on Windows PCs on a Mac. You can also share files using e-mail, a network volume, recordable CDs, Zip disks, a .Mac iDisk, or other storage devices.

**Some of the common file types are:**

**Productivity**

Plain text (.txt), rich text (.rtf), Word (.doc), Dbase (.dbf), Excel (.xls), PageMaker (.pm3, 4, 5, 6), PowerPoint (.ppt), Quark XPress (.qxd), Quicken (.qdf)

**Media:**

MP3 (.mp3), AAC (.aac), AIFF (.aiff), ASF (.asf), AVI (.avi), MIDI (.midi), MPEG1, MPEG 2, and MPEG 4 video (.mpg, .mp2, .mp4), QuickTime Movie (.qt, .mov), Real Audio/Video (.ra, .ram), Wave Form Audio (.wav), Windows Media Audio and Video (.mwa, .wmv)

**Graphics**

BMP (.bmp), GIF (.gif), JPEG (.jpg), TIFF (.tif), PICT (.pct), EPS (.eps), Photoshop (.ps), PostScript (.ps), PDF (.pdf)

**Internet**

HTML (.html, .htm), MIME (.mim, .mime), XML (.xml)

**Compression**

Stuffit (.sit) and ZIP (.zip)

Filename extensions are usually hidden in Mac OS X. To show the filename extension for all files, choose **Finder > Preferences** and select “Always show file extensions.”

## 6.7 Connecting To Networks And The Internet

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If you have an Internet connection on a PC, you can probably use the same Internet settings on a Mac. The easiest way to set up your Internet settings is to run the Setup Assistant, which can be opened from the Network pane of System Preferences. Gather the Internet settings information from the PC, or ask the system administrator or Internet service provider (ISP) for the information needed. If you used a dial-up, DSL, or cable modem with the PC, you can find the settings in the Internet Options control panel. If you used a network connection, you can find the network settings and addresses in the Network Connections control panel.

AirPort provides wireless access to your network and the Internet. You can put a Mac anywhere in the house, or connect to wireless networks at work, at home, and in airports, cafes, hotels, and other locations.

Many employers let you work from home using a secure virtual private network (VPN). To use VPN, you need an account on the server, which you get from your network administrator. Once you have your account information, you use Internet Connect to connect to the network.

## 6.8 Setting Up E-mail And Instant Messaging

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You can easily set up your e-mail application using settings from a Windows computer. You can use Apple's built-in Mail application or another application such as Netscape, Eudora, or Microsoft Entourage. You'll need the following information to set up e-mail:

- email address: **tdigit@mac.com**, for example
- User name: **tdigit**, for example
- **Password**
  - Account type: IMAP, POP, .Mac
  - Incoming mail server: **mail.mac.com**, for example
  - Outgoing mail server: **smtp.mac.com**, for example

Every Mac also comes with iChat AV, which lets you use a .Mac e-mail address or AOL Instant Messenger (AIM) screen name to chat with users of iChat AV, AIM, Jabber, and Google Talk. iChat AV automatically helps you get set up the first time it is opened.

## 6.9 Printing

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Printing documents on the Mac is very similar to printing on a Windows PC. In Mac OS X, you set up and access printers using the Print & Fax pane in System Preferences.

You can connect most FireWire and USB printers to the computer while it is turned on. Mac OS X includes drivers for today's most popular USB and network printers. For some printers you may need to go to the manufacturer's Web site and download the latest drivers.

## 6.10 Connecting And Using Peripherals

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Most USB and FireWire cameras, camcorders, and storage devices used on a PC can also be used on a Mac. To check for compatibility, go to Apple's peripheral compatibility site at [www.apple.com/macosx/upgrade/devices.html](http://www.apple.com/macosx/upgrade/devices.html).

Mac OS X has built-in support for USB mice and keyboards. You can use a two-button mouse and a mouse with a scroll wheel. Check the mouse manufacturer's Web site for Mac OS X software to enable other features, or go to the Apple Drivers site at [www.apple.com/downloads/macosx/drivers](http://www.apple.com/downloads/macosx/drivers).

Mac OS X supports many USB and FireWire digital cameras and most FireWire camcorders. iPhoto and iMovie open automatically when you plug in a camera or camcorder. Click Import to import photos or movie clips.

Mac OS X supports most USB and FireWire storage devices. When an external hard disk, CD burner, Zip drive, or other storage device is plugged in, an icon appears on the desktop. The manual that comes with Macs also provides information about connecting and using USB and FireWire devices.

Most Macs work with any VGA-compliant display or projector. Some Macs also work with DVI displays and displays that use the Apple Display Connector (ADC). The documentation that comes with Macs can be read for more information.

## 6.11 More About Macs

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Want to find out more about using a Mac or solve any problems? The Apple Web site provides an easy and convenient place to look.

### **Tips and Support**

For tips and support information about Macs, visit the Apple

Service & Support Web site. You can search for articles or browse information available for any Apple product: [www.apple.com/support/](http://www.apple.com/support/)

### **Apple Downloads**

Apple frequently updates software for Macs. At the Apple Downloads website, you'll find "firmware" updates for Macs and AirPort, and software updates for iPods, Mac OS X, and Apple applications: [www.apple.com/support/downloads/](http://www.apple.com/support/downloads/)

For an extensive catalogue of downloadable third party software for Mac OS X, visit the following link: [www.apple.com/downloads/](http://www.apple.com/downloads/)

### **User's Guide and Manuals**

For information on setting up a Mac and using its features, you can download a copy of the user's guide that comes with Macs from the Apple Web site: [www.info.apple.com/support/manuals.html](http://www.info.apple.com/support/manuals.html)

### **Product Specifications**

The Apple Support Web site includes technical specifications for computers, servers, iPod, AirPort, and displays. Visit the Apple Specifications Web page: [www.info.apple.com/support/apple-spec.html](http://www.info.apple.com/support/apple-spec.html)

### **Apple Discussions**

The Apple user community is a rich source of information about Macs. The Apple Support Web site provides many discussion forums where users can share information. Visit the Apple Discussions page: <http://discussions.info.apple.com/>



# The iLife Suite



**E**ver felt that creative urge while at your computer but couldn't get started because the software was too complicated? Ever got into the DIY spirit but couldn't proceed because of insufficient help? How about an application suite that ensures your inspiration isn't wasted? Presenting iLife...

## 7.1 What Is iLife?

iLife is not an application but a collection of tools designed to work in a manner that integrates them tightly to form a suite. iLife includes iPhoto, iMovie, iDVD, iTunes, Garageband, and the new addition, iWeb. Each of these apps contributes to providing you with a complete experience, from organising your media to processing it and to publishing it. Let's look at each of these apps and how good they are.

## 7.2 iPhoto

iPhoto, as the name suggests, is a photo management application, and a very good one. Right from importing photos from your digital camera to editing them to burning them onto disc, iPhoto is all that is needed to manage digital photos.

### 7.2.1 The Interface

Apple is said to be good with the design of their interfaces, and iPhoto proves that. Everything is self-explanatory. It has a limited

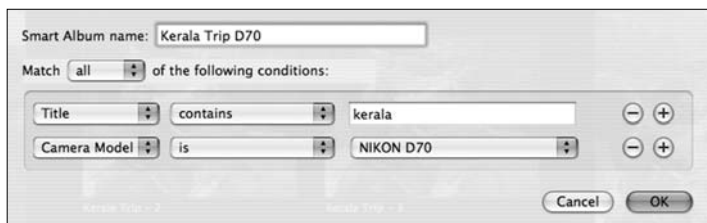


## The iPhoto Interface

feature set meant for home users and casual photographers, so the interface is not cluttered with too many buttons.

## 7.2.2 Photo Management

The moment you plug in a digital camera or memory stick, iPhoto automatically launches and is ready to import pictures into its library. The import screen gives options for changing title attributes as well as for directly sorting them in its own library. While importing, if iPhoto finds that a photo has been imported earlier, it will show a warning dialog along with options to not import or to overwrite.



iPhoto's Smart Album

Once imported to the library, photos can be sorted out into their own Albums or Smart Albums. Albums are basic and static—very much like a folder where you have to manually add pictures. Smart Albums on the other hand are live-updating, that is, they change the pictures on the conditions set. Say you want all pictures taken on your trip to Europe, but your library also has pictures taken using your friend's camera; a Smart Album could be set to display only those pictures tagged with “trip to Europe” and taken by your “Nikon D70.” If additional pictures are added to the library which fit the criteria, they will automatically appear in the library.

The source pane also has presets like “Last Roll,” which shows you the most recent imports, and “Last 12 Months.”

iPhoto integrates Spotlight search, which enables you to quickly find a photo amidst a vast library. However, this search is some-

what crippled as it does not search for details like camera model and date taken. No advanced search options means one is left to creating Smart Albums to locate such pictures.

### 7.2.3 Editing

On double-clicking an image inside the library, a full-screen view opens up with editing tools at hand. Editing options from cropping, rotating, red-eye removal, as well as colour adjustments are



iPhoto opens into a full-screen view by default

shown on the screen. All these are to be considered tools for home use and not as replacements for professional apps. The Compare button allows one to compare two or more similar photos to see which one is better.

After saving over the original, one can “Revert to Original” at any later date. This feature is very handy: it saves the hassle of managing the originals in a separate location.

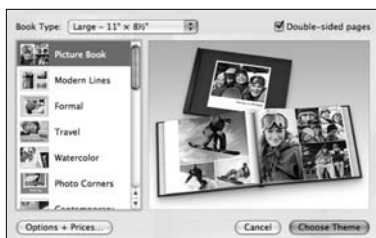
### 7.2.4 Publishing

Here is where iPhoto truly shows its worth. There are so many ways to publish your images, right from Slideshows, Postcards, and Calendars to E-mail and Photocasting.



### Publishing options of iPhoto

Creating any one of these is a click away and does not require any expertise. Slideshows created in iPhoto can be conveniently accessed by apps like FrontRow or iMovie, and can even be published to a QuickTime movie file to use the slideshow on a PC or video player.



The iPhoto Book Wizard

Creating a calendar was never so simple. Click on the “New Calendar” button, following which you select a template, and it’s done. It can even import your appointments from iCal (OS X’s calendar application), and birthdays from the Address Book. You get all your appointments printed along with the dates. It imports national holidays of a specified country, which adds to the professional feel. For filling in pictures, one can either drag and drop the pictures onto the calendar or choose the Autoflow option which automatically fills the calendar with random layouts. The process—and we cannot overstate this—is very, very simple. The process is similar for creating Photo Albums and Greeting Cards.



iPhoto can import appointments and birthdays

Publishing to the Web has been given importance. E-mailing options include size optimisation. iPhoto also has a Photocasting feature: a photocasted album can be viewed by family and friends in their iPhoto window. As photos are added to the album, it automatically updates photos on the viewers’ computers. However, this

requires a paid .Mac account. You can also publish to iWeb as either a photo page or a blog post. There is also the standard option to burn it to CD or DVD.

## 7.3 iMovie HD

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Home-made movies never quite cut it to the extent that they would have resemblance to a professional-grade movie. Step in iMovie, the simplest and easiest way to use a movie editor. You get powerful editing capabilities including the ability to edit High Definition movies.

### 7.3.1 Importing

iMovie imports from a wide variety of sources, right from DV, DV Widescreen, and MPEG-4, to HD video sources up to 1080i. On importing, the iMovie window is presented. Clips are arranged in the top-right corner. The timeline is at the bottom.



The iMovie main window



Starting off with iMovie

The moment a DV camera is plugged in, the preview window shows the camera's contents. Press Import, and iMovie imports the video while automatically making new clips for new scenes.

### 7.3.2 Editing

Right from cutting your video up into clips to applying effects, the whole process is simplified. To the right are five tabs: Clips, which are separate video files arranged in the project library, and Themes, Media, Editing, and Chapters, which can be used while publishing the movie in iDVD.

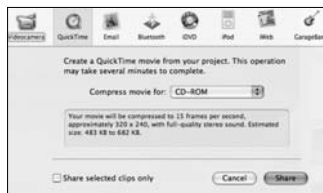
iMovie comes with a number of themes each with sub-theme elements like opening, credits, and chapters. The Media tab allows you access to all media stored in iPhoto and iTunes. The Editing tab gives access to various movie effects like Title Effects, Transitions, Video Effects, and Audio Effects. Selecting a video effect automatically renders a preview of the selected clip. Applying the effect then renders the clip to match the effect.

### 7.3.3 Publishing

iPhoto has an extensive list of options for exporting your movie, right from high-quality H.264 QuickTime movies to Web-friendly versions. None of these options has complicated settings to figure out. There are only self-explanatory options like “CD ROM” or “Share for Web.”



Media in iMovie



Exporting a movie

## 7.4 iDVD

We said iLife is all about integration, and this is where it's proved.

### 7.4.1 Creating Projects

Apart from the obvious exporting to iDVD



Inserting movies into iDVD

option from iMovie, iDVD gives you the option of creating a Standard project, Magic iDVD, or a OneStep DVD. The Standard project gives options for the 4:3 format and the 16:9 format.

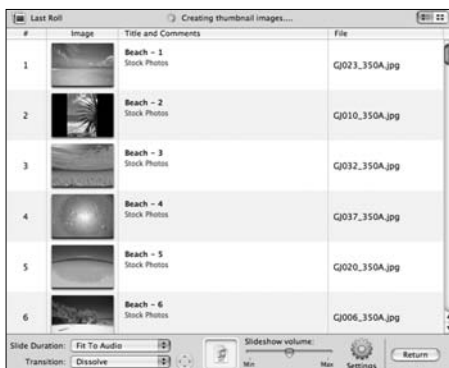
## 7.4.2 Editing

When you get to the main iDVD window, you are presented with beautiful Apple-designed themes. Most of the themes are animated, which gives the final output a professional look. You drag pictures or video into the marked grey “Hot Spots” to add content to the theme.

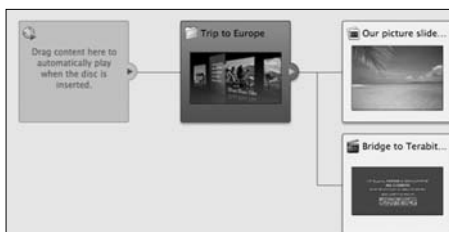
Adding media is easy—drag and drop directly from your Movies folder, iTunes, or iPhoto library. Changing background music means dragging a track from the media library and dropping it into the main window. Click the Add button to add a slideshow, movie, or submenu. Editing menus is very simple, too.



Add media to iDVD themes



Editing slideshows in iDVD



iDVD's Map View

There are three modes to iDVD: Motion, Live Preview, and Map mode.

The motion view gives you a live preview of what the DVD menu will look like, along with editing features. The Map view gives the sequence in the form of a tree diagram. The Preview view



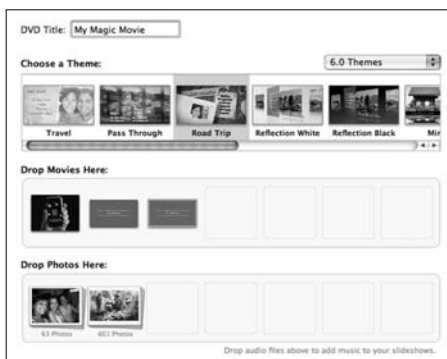
renders the DVD in real-time to give an actual feel of the final product. All the menus and effects are fully-functional in this mode: a control panel similar to that of regular DVD players comes up on-screen to control the DVD as it would look like when it is published.

### 7.4.3 Publishing

There's just one button for burning, and the entire process of transcoding the movies to creating menus is carried out in a step-by-step process. This includes rendering the menus and slideshows, after which the movies, if in a different format, are transcoded (converted) to the DVD format. The movie is then burnt to disc. One can also create a disc image, which follows all the above steps, but instead of burning a disc, it makes it a mountable image.

### 7.4.4 Magic Movie and OneStep DVD

Magic Movie is the fastest way of creating a DVD movie. There is just one step where the movies and pictures are added, and the project is directly burnt to DVD. (See screenshot below.) OneStep DVD creates DVDs directly from, say, a FireWire camcorder, creating a basic DVD without menus or effects.



Using Magic Movie

## 7.5 Garageband



The Garageband main window

Garageband is almost a pro application: the power of the app is such that many artists have produced music using only Garageband!

### 7.5.1 The interface

Garageband has a radically different look from the other iLife apps. It features a darker look along with wooden sides. The workspace is like that of all music creation tools, with a track followed by a timeline. On the right, you have the standard iLife Media, which includes media from iTunes, iPhoto, and iMovie.

At the bottom, one can browse the various inbuilt loops, or get the track editor. Loops are small sound files such as a guitar riff or a drum roll which are “looped” over and over again in the creation of songs. In between, there is the control panel with buttons for play/pause and volume, among others.

### 7.5.2 Editing

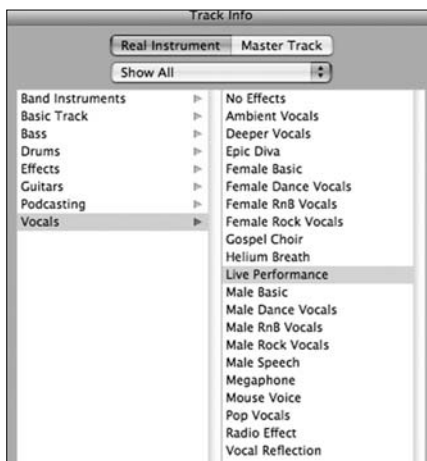
Creating music with Garageband is plain fun. Drag and drop loops into the work window and then copy/paste them. The loop browser



### Using Garageband's loop browser

has categories which on clicking narrow down the search for a loop. For instance, if you want a drum beat for an “Urban” track, you would click on “Beats” and “Urban.” There’s also a “browse by categories” in a column view. Spotlight search is, of course, integrated.

Garageband is also good for recording music. There are two ways to create music—software instrument or real instrument. When creating a new track, one needs to select between these two. Software instruments can be controlled by a MIDI keyboard or by using the onscreen keyboard. (A MIDI keyboard is one that connects to the computer digitally, where each sound is a digital instruction interpreted by the software.) So you



### Selecting instruments in Garageband

select the software instrument, and playing on the MIDI keyboard will produce that particular sound. The output can be tuned with various customisations like chorus, echo, and reverb.

As for real instruments, the possibilities are endless. One can either connect the instrument through the line-in or record it off the inbuilt microphone. Even here, one can select various effects organised under categories—Vocals, Guitars, Piano, Drums, Effects, and more. For instance, one can connect an electric guitar to the line-in, and select the “grunge” effect to record a grunge



Editing a track using Garageband

riff. Garageband also features an instrument tuner that allows tuning of any real music instrument.

Track editing is also facilitated—there is volume management which allows you to select variable volume settings throughout a track, and stereo dimensions, which direct the sound either to the left or the right channel. One can split and cut and paste tracks right within the main workspace. For more advanced track editing, there is the track editor (which has options for Enhance Tuning of real instruments). The same goes for Enhance Timing.

### 7.5.3 Podcasting

Garageband offers a special mode for podcasting with a standard set of Male Voice, Female Voice, Jingles, and Radio Sounds. On creating a new podcast, one is presented with a window with four tracks corresponding to the above. There's also a podcast pane at the bottom, which replaces the track editor. It has a place to drag Episode Artwork, chapter markers and artwork, and URLs to chapters. To create a podcast, you just press the Record button on either Male or Female Voice, and it's your own radio station. Use the loop browser to search for jingles and radio effects. These podcasts can then be exported to iTunes or iWeb, or saved to disk.



Podcast controls

### 7.5.3 Publishing

Garageband offers direct exporting in AAC format to iTunes and iDVD, as well as to iWeb. There is also “save to disk” option which cre-

ates an m4a file. There are no settings involved as Garageband automatically decides the quality of the export. While this may be crippling for professionals, home users will find this very easy. And it's even quite good at deciding which song needs a 64 Kbps bitrate and which needs 320 Kbps. Music is automatically added to the iTunes library, ready to play at the next Front Row session.

As for exporting movies and podcasts, one can set the desired quality in the settings.

## 7.6 iWeb

The latest entrant to the iLife package is iWeb. This completes the iLife package from creating to organising to publishing it online. iWeb is an application to create Web pages. But this is not your average HTML editor. The entire process of adding code is removed, and what is left is a simple applica-



iWeb's main page

tion for novices and intermediate users alike. iWeb can let you create a Web site in 10 minutes!

### 7.6.1 The Interface

On opening iWeb, you choose a template from which the workspace presents itself with three main areas: the Site organiser to manage your sites, the working canvas in the centre, and the toolbar at the bottom.

### 7.6.2 Creating sites

We have yet to come across a more simple Web site building applica-



The default iWeb templates

tion. The well-thought-out templates make it really simple. Just choose pages such as Blog or Photos from the template window, and add text or drop images from the Media Browser.

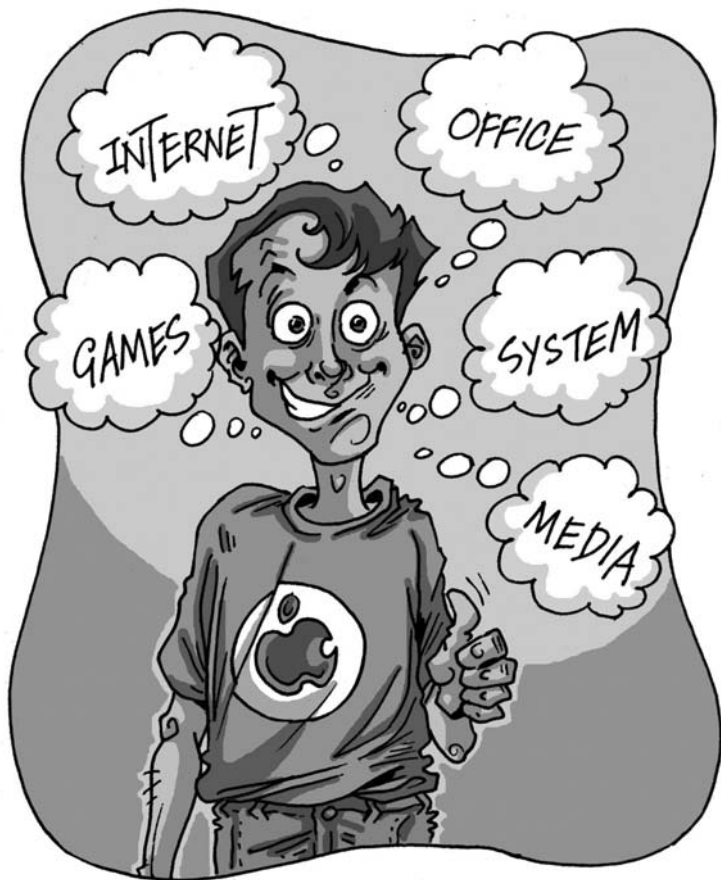
iWeb is *too* simple, and advanced users need to look elsewhere. There's no HTML editing whatsoever, which leaves a pro user stranded with using generated code that one has to manually alter after exporting. Another drawback of iWeb is that it creates heavy pages, which take time to load on a slow connection. There is a lot of junk code created, as well as text to image conversion: if iWeb finds a non-standard font, it rasterises it to an image file without Warning. This dramatically increases page sizes.

### 7.6.3 Uploading

iWeb is designed for users of a .Mac account. Just hit upload and the entire site gets synced without any problems. A little correction can be re-uploaded in under a minute.

What iWeb lacks is a proper FTP tool for uploading to independent servers. Without a .Mac account, one has to export the site to a folder and then upload it from there, which can be a daunting process for a novice. A small change can lead to a lot of complications.

# Software



**O**ne thing you'll hear very often about the Mac platform is, "Fine! It's a brilliant computer, it has a brilliant OS, it's well-designed, but where is the software??" We'd like to tell you: Yes, there does exist software for the Mac—and quite as much as you'd want!

There are a lot of misconceptions about software on OS X. Most importantly, quite a lot of people believe that the Mac platform suffers from a lack of quality software. Their views stem from the 1990s, when there really was a problem of lack of software for the Mac. However, today, there happens to be a large list of software available for the platform.

With the launch of Intel Macs, you can run Windows applications using virtualisation tools like Parallels alongside your Macintosh applications. You can also use software like Darwinie and Crossover Mac to run Windows applications natively on OS X!

We list here some software that we believe are essential for the Macintosh.

## 8.1 Internet

### 8.1.1 Browsers

#### Safari

Safari is the default browser that ships with Mac OS X. It was first introduced in OS 10.3—“Panther”—in 2003. With OS 10.4—“Tiger”, Apple dropped Internet Explorer, and Safari became the only browser included in OS X. Safari is based on Konqueror’s KHTML engine. Konqueror is a free, open source browser that ships with KDE.

Safari is tightly integrated with OS X, so it’s more than satisfactory in the performance department. It boasts of a clean, minimalist interface with a cus-



Screenshot: Mac OS 10.4 running Safari.jpg



tomisable toolbar. Features include an RSS reader, tabbed browsing, private browsing (a mode that does not retain browsing history), and more.

## Firefox

Firefox is one of the most well-known browsers. It is a free, cross-platform, open source browser from the Mozilla stables. The current version of Firefox is 2.0.0.3, with version 3 expected later this year.

However, Firefox is not very well integrated with OS X. It does not feature the Cocoa interface, which makes it look a bit dated when compared with browsers like Camino and Safari.

Features of Firefox include an extension manager, a theme-able interface, tabbed browsing, and an integrated download manager.

## Camino

Camino can be best described as a cousin of Firefox with a native Mac interface. It was first introduced in 2002 as Chimera. Since then, the leading developer of the Camino project, Dave Hyatt, has moved to the Safari team at Apple. Mike Pinkerton has been the technical head of the Camino project since Hyatt left.

Like Firefox, Camino is free and open source. The current version of Camino is 1.0.3, and version 1.1 is in the works. What really distinguishes Camino from Firefox is its Mac-native Cocoa interface, which makes using Camino a pleasant experience. However, it is not as feature-rich as Firefox. It does not feature an extension manager and it cannot be themed.



Screenshot: Camino in full flow!.jpg

### 8.1.2 Chat Clients

Like Linux users, Mac users have to make some sacrifices when it comes to chat clients—while good clients exist, they aren't as full-featured as their Windows counterparts.

#### Adium

This is a free, open source, instant messaging client based on the lib-gaim library. Simply put, Adium is one of the best IM clients across all platforms, if not the best. It supports multiple protocols like AIM, ICQ, Yahoo, MSN, iChat, Google Talk, and more. The current version is 1.0.1, which was released as recently as February 2007.

Adium boasts of a large number of features including a plugin manager, fully customisable user interface, tabbed chat windows, file transfer with multiple protocols, chat logging, and more. It has a near-dominance in the Mac world.

#### Yahoo! Messenger

Yes, Yahoo does release software for platforms other than Windows! After years and years of no development, Yahoo! sprung a bit of a surprise with their beta version of Yahoo! Messenger 3 late last year. The latest version is 3.0b1. Yahoo! Messenger for OS X boasts of a native Mac Cocoa interface, along with an extremely well-designed user interface. Its features are the same as those of Yahoo! Messenger for Windows. However, it does not support voice chat or audibles, which are quite popular among Windows users.

However, Yahoo! has promised to include voice chat support in beta 2 of Yahoo! Mes-



Adium running the Google Talk, Yahoo and MSN protocols

senger 3. It's been quite a while since beta 1 was released, so we hope we see beta 2 and the final version of Yahoo! Messenger shortly!

### Microsoft Messenger

You can't keep Microsoft out of the action for long, can you, now! Microsoft maintains Microsoft Messenger for OS X, and to its credit, they do update it regularly. The current version of Microsoft Messenger for Mac is 6.0.2, which was released in January 2007.

Like Yahoo! Messenger, Microsoft Messenger for Mac also features a Cocoa interface that makes it just that bit better to use. However, the feature set of Microsoft Messenger is quite limited, and it does not support voice, webcam, and the other advanced features offered by its Windows counterpart.



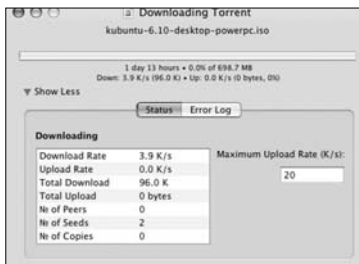
The all new Yahoo Messenger for Mac

It has been criticised in the past for being a resource hog. It does tend to work rather slower than other IM clients. However, the Mac team at Microsoft has promised improvements to the client in the near future.

### 8.1.3 P2P Clients

#### Tomato Torrent

This is an open source and free torrent client for OS X. Tomato Torrent is developed and maintained by Sarwat Khan, who has dedicated it to Batman! It's a fork of the official BitTorrent client. The current version is 1.5 beta 1, with development having been halted for a while.



Tomato downloading the Kubuntu CD iso

Tomato Torrent is a very basic torrent client, and it does not include advanced features like a distributed database or the ability to choose the files you want to download. However, Tomato scores over clients like Azureus because of its extremely light interface, which puts a minimal load on the system. It is ideal for people with slower computers.

We do expect you to download only legal stuff—really!

### **Azureus**

Azureus is another free, open source, cross-platform torrent client. It is developed and maintained by a set of core developers who have formed a company called Azureus Inc. The current version is 2.5.0.4, with the 2.5.x versions being a great improvement over previous versions, especially on OS X.

Over the years, Azureus has become one of the most popular torrent clients, and it commands a dominant market share particularly on platforms other than Windows. It boasts of advanced features like distributed database, encrypted file sharing, scheduling of downloads and uploads, ability to choose custom files to download, and more.

However, Azureus has been criticised in the past for being very slow, especially on OS X. With version 2.5, Azureus has shown great improvement, and we expect it to improve further in the future.

## **8.1.4 Download Managers**

### **iGetter**

This is one of the few download accelerators plus managers available for OS X. iGetter is paid software—\$25 (Rs 1,000) per license. The current version is 2.5.

The interface of iGetter can be customised—you can either use the Aqua or the Brushed Metal interface. It includes features like integration with various browsers, resume support, mirror search, a speed limiter, and more. In fact, it is one of the few download



The iGetter interface

managers that integrate very well with all browsers—Safari, Camino, Firefox, Opera, Omniweb, and more. The only downside to iGetter is that it's paid software.

### Speed Download

This one is a recently-released download manager marketed and maintained by Yazsoft. Like iGetter, it is a paid software: \$25 (Rs 1,000) per license. The current version is 4.1.9.

Speed Download is a highly-rated, award-winning software that boasts of features like FTP browsing, smart folders, browser integration, .Mac integration, the Cocoa interface, and more. It has been highly rated by the Mac community with Spymac, Softpedia, MacTeens and Mac Review giving it a full five stars out of five in their review. Speed Download offers very good competition to iGetter.

## 8.2 System Tools

### QuickSilver

Though OS X Tiger's Spotlight feature takes away from its punch a bit, QuickSilver is still a handy application to have around. Just like Spotlight, its basic function is launching applications and documents with a simple keystroke ([Ctrl] +



QuickSilver hasn't quite lost its bite]

[Space]) rather than hunting for them through Finder, but where Spotlight stops at just opening applications and files, QuickSilver lets you perform a bunch of actions—Move to Trash, Open With..., queue in iTunes, look up in the dictionary and so on, from within the interface. QuickSilver's search supports abbreviations, so it works even if you type the first couple of letters for every word in your filename—Adobe Photoshop, for instance, will come up even if you type "Ad P" without the quotes.

QuickSilver is also quite extensible through plugins—a del.icio.us module, for example, lets you post a URL to your del.icio.us bookmark list. You can find a substantial (though not exhaustive) list of plugins for QuickSilver at <http://quicksilver.blacktree.com/plugins.php>.

### Toast Titanium

This is a CD and DVD burning application for OS X and is released, maintained, and marketed by Roxio. It is one of the oldest burning applications for the Mac platform. The current version is 8.0. However, Toast Titanium is one of the most expensive applications for OS X, retailing at \$80 (Rs 3,200).

The interface is its selling point. It is one of the best-designed applications for OS X. It boasts of features like burning CDs and DVDs at various industry standards, converting video files to other formats, drag and drop support for video conversion and DVD cre-

ation, beautiful DVD menus, and widescreen DVD support.

With version 8, Toast also exclusively supports TiVo and EyeTV video recorders. So you can watch TiVo-recorded shows on you Mac, or you can burn your shows to DVD or a DivX disc to view it on DVD and portable players.



The elegant Toast interface

## Burn

Burn is another CD and DVD burning application for OS X. However, it is free, open source and extremely easy to use. The current version is 1.62u.

Interface-wise, Burn is the complete opposite of Toast Titanium. Burn offers a minimalistic, clean, and light interface compared to Toast's heavily graphical one. However, Burn does not compromise on any features. It allows burning of CDs and DVDs at various industry standards, conversion of video files from one format to another, burning of CD/DVD images, and more.

The main advantage Burn enjoys over Toast is that it is free. The cost factor becomes even more significant as Burn offers most of the features that Toast does.

## OnyX

According to Titanium Software, the developer of OnyX: "OnyX is a multifunction maintenance, optimization and personalization utility that allows you to run miscellaneous system maintenance tasks, to configure hidden parameters of



The OnyX interface

different OS X applications, to see detailed information about your system and to preview system logs.” Simply put, OnyX allows you to keep OS X as fast, stable, and error-free as a new installation.

OnyX is freeware; the current version is 1.7.8. It offers various features including running of daily maintenance scripts, optimisation of system and various applications, customisation of the user interface of various applications, and access to hidden features of OS X.

There are applications like Cocktail that offer similar features, but then you can get OnyX for free.

### **SuperDuper**

This is a widely-acclaimed disk backup program developed by a company called Shirt Pocket. SuperDuper is a paid application, and you need to shell out \$27.95 (Rs 1,120) for a copy.

Like so many other OS X applications, SuperDuper offers a very clean, simple, and organised interface. It offers features like cloning of a partition and backing up of the files of applications like iTunes, Mail, and iPhoto.

**The developer offers some reasons why you would need Super Duper:**

- Your hard drive starts making that horrible clicking noise that signals an imminent meltdown
- A momentary lapse of coordination causes your PowerBook to take a dirt nap
- The system suddenly fails to boot
- Your most important day-to-day application isn't working with the system update you just applied
- The new driver you just updated is causing your Macintosh to crash
- That lousy software you just tried didn't come with an uninstaller, and scattered files all over your drive



## ShapeShifter

ShapeShifter is the WindowBlinds of the Macintosh world. It's pretty much the only software available on the Mac platform that enables you to apply skins to make OS X look better. It's developed by Unsanity, and costs a reasonable \$20 (Rs 800).



Why you would want to skin your Mac is beyond us, but ShapeShifter comes to your aid nonetheless

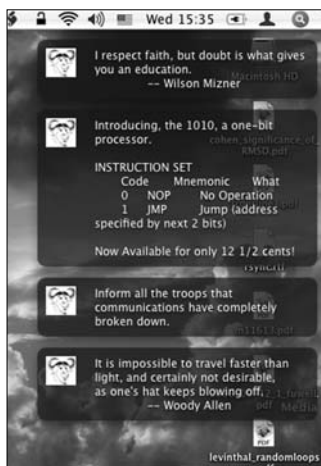
The current version, 2.4, can only be used on Tiger. You can use Shapeshifter to tweak and apply compatible themes safely and securely. It makes a backup of your default theme, so in case you apply a theme that is incompatible with your operating system, you can revert to the default theme.

There are a plethora of themes available for ShapeShifter. You can get themes at Maxthemes.com (home to the legendary Milk theme), Swizcore.com, Interfacelift.com, and Macthemes.net.

This software replaces your system files while installing and tweaking themes, so we'd advise you to be careful while using it.

## Growl

It may not sound like much, but Growl is a nifty little application that handles all those notifications that your applications keep giving you—contacts coming online in Adium, new mail, and so on. A disappointing thing is that applications need to be built with Growl support, so if your favourite



Growl lets you control application notifications

application doesn't have it, you'll have to pester the developers to add it in.

Growl lets you customise how supported applications notify you—it can read out the messages or even e-mail them to you (not advisable unless you're away from your PC and *really* need to know what's happening on it), or even suppress them completely and just log them.

## Forklift

Forklift is the Mac's answer to two-pane file managers like Midnight Commander, and then some. With just Finder, the simple task of dragging files from one folder to another (à la Windows Explorer) can be a



Forklift gives file management new dimensions

pain, and Forklift's interface is welcome respite. In addition, Forklift is an FTP/SFTP client, and can even browse through mobile phones connected via Bluetooth.

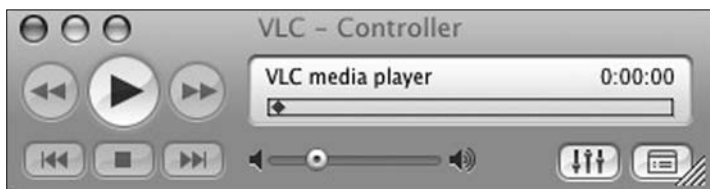
Forklift features tabs, so you can have different combinations of folders open without the clutter. It also reads archives (ZIP, RAR, and more) as if they were folders. It's sad that you have to pay for it (\$29.95, Rs 1,200), but if you find yourself limited by Finder (which you will sometimes), the investment's worth it.

## 8.3 Multimedia

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### VLC

As you might know, VLC is a free, open source and a cross platform media player that supports a large number of video and audio formats. It was originally developed by students at the École Centrale, Paris, and was released under the GPL license in February 2001. However, today it is developed by a large number of contributors from all over the world.



The VLC controller window

VLC—or VideoLan Client—features a Mac-native Cocoa interface. However, it looks similar to its Windows counterpart. The only feature that it loses out on is skin support. VLC features skin support across all platforms except OS X.

As we said earlier, VLC supports a large number of video and audio formats including OGG, Vorbis, MPEG4, DVD video, Cinepak, DV, H.263, H.264, Indeo, WMA, WMV, AAC, AC3, AMR, ALAC, and more. From version 0.8.6, VLC also supports WMV9 videos natively, so you no longer need to use the age-old Windows Media Player or the slow and clumsy Flip4Mac plugin to play WMV9 files.

### Cog

This is an open source and free audio player for OS X. It is developed by Vincent Spader, who is also the author of the brilliant audio conversion application called Max.

Cog is a simple audio player, and is a good alternative to iTunes. Over the years, iTunes has become a resource hog, and that's where Cog

scores over it, since it has remained a basic audio player: it's extremely light and supports various formats like Ogg Vorbis, MP3, FLAC, Musepack, Monkey's Audio, Shorten, Wavpack, AAC, and WAV/AIFF.

The interface is very simple. Cog is perfect for those who want just a simple music player, without the jazz and complexity of iTunes.

### ffmpegX

The Swiss Army Knife of video converters on the Mac platform! This is a shareware video encoder that supports a variety of formats. The current version is 0.09x, which was released in October 2006.

ffmpegX reads formats such as MPEG-1, MPEG-2, MPEG-4, DivX, XviD, VOB, MOV, WAV, H.263, H.264, WMA, WMV, AAC, AC3, 3GP, and more. It can convert these to DivX, XviD, H.264, MOV, DV, 3GP, MP2, MP3, AAC, MPEG-1, MPEG-2, VCD, SVCD, KVCD, DVD, and more.



The ffmpegX converter window

It's one of the easiest video encoders available—you just need to drag and drop a video file into the ffmpegX window to convert it. ffmpegX will automatically identify the format in which it is encoded, and then you just choose the format you want to convert it to.

### Final Cut Pro

Apple's Final Cut Pro (FCP) is one of the reasons for the widespread perception that Macs are the best for video and image editing. It's probably the best non-linear video editing tool there is, and has been used for many major movies, including Frank Miller's *300*. It supports every imaginable movie format—including HD—and features an architecture that makes it easy for developers to build plugins for it.



Final Cut Pro is one of the more formidable applications for the Mac, and one of the reasons you should switch if you need to edit video.

If you've got the necessary Mac hardware (we're talking about the higher-end iMacs and Mac Pros here), you can enjoy FCP's real-time effects—pull down frame-rates, adjust image quality, and a whole lot more. It bundles LiveType 2, an application dedicated to creating dynamic, animated titles for your movies.

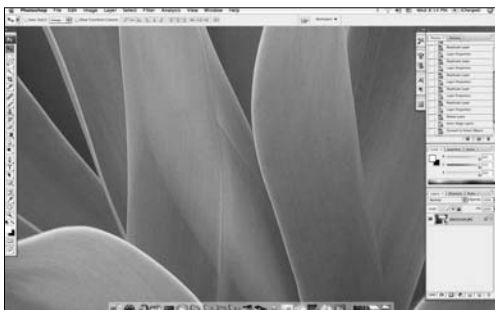
Unfortunately, you can't download a demo of Final Cut Pro—it comes for a painful \$1,299 (Rs 52,000), not to mention the price of a Mac to run it—of course, this makes sense only for a big movie studio. For low-budget video editing, you can get Final Cut Express for \$299 (Rs 12,000).

### Adobe Creative Suite 3 (CS3)

With CS3, Adobe returned to the Mac with a vengeance—while previous versions were better on Windows, CS3 has been optimised for the Mac.

The Mac version of Photoshop CS3, for example, runs 40 per cent faster than Photoshop CS2 (on Intel Macs)!

Now that Adobe CS3 also includes former Macromedia products like Flash and Dreamweaver, CS3 for the Mac feels just like it should—complete, well-integrated, and performance-optimised. There's not



Adobe's CS3 has been optimised for Intel Macs

much of a difference in the way the applications look between Windows and OS X, but we don't particularly like the fact that there's no "containing window" that holds all the palettes and toolboxes à la Windows—one wayward click and you'll find that focus has shifted away from your application to the Desktop.

This has been a long-debated issues with Adobe software on the Mac; since it seems like we'll have to live with it, we will.

To witness CS3 in action (on Windows, at least), install the Windows version of the CS3 Design Premium Trial from this month's DVD.

### Autodesk Maya 8.5

With newer Macs sporting more than respectable hardware, you might as well use them for some 3D graphics, and the tool of choice is Autodesk Maya. While 3ds Max is a Windows-only tool, Maya has always been a competent cross-platform option.



Maya brings professional 3D graphics to the Mac

It brings its unique, intuitive interface to the Mac and lets you

create realistic graphics (assuming you've got the talent), and there's even a free version! Try out the Windows version of the free Personal Learning Edition on this month's DVD. We've talked about Maya in previous issues of *Digit*, and since there's not much difference between the Windows, Mac and Linux versions, there's not much more to say than "enjoy!"

## 8.4 Office Tools

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### 8.4.1 Microsoft Office

The big daddy of software, Microsoft, released its first version of Office for Macintosh in 1989. Yes, one full year before the first Windows version appeared! Office 2004 is, naturally, paid software, and you'll need to shell out \$399 (Rs 16,000) for the standard edition. The current version is Office 2004 and the new version, Office 2008, will ship later this year.

Office is one of the few applications by Microsoft that really stands out in terms of usability and features. Office 2004 for Mac offers all the features and programs that Office 2003 offered for Windows, with the exception of Microsoft Access.

One of the negative points about Microsoft Office 2004 is that it is not a universal binary—that is, it is not an Intel-native application yet. It has to be run on Intel Macs under Rosetta, a PPC emulation mode. For home users, this does not pose much of a problem, but for professionals, who are Microsoft's target market, running



The standard Word interface

Office under Rosetta is not a pleasant experience, especially when dealing with large files. Office 2008 will be a universal binary.

The interface of Office 2004 is innovative and elegant. Unlike

Office for Windows, toolbars are not fixed to the main window: you can place them anywhere on the screen.

### 8.4.2 Apple iWork

This is an upcoming set of office applications from the Apple stables. Currently, the iWork package includes Pages and Keynote. Pages is a word processing application, and Keynote is a slideshow application. The iWork package is billed as the successor to the AppleWorks office suite. However, the iWork package does not replicate the spreadsheet tool or the database tool offered by AppleWorks.

iWork comes as a 30-day trial on new Macs, and it is \$79 (Rs 3,200) for a copy. The current version is iWork'06, with iWork'07 expected to be launched along with Leopard, Apple's next-generation operating system.

As mentioned earlier, Pages is a word processing application, and supports document formats like .pages, .doc, .pdf, .html, .rtf, and .txt. It comes with pre-loaded templates from Apple including those for newsletters, journals, invitations, education projects, and more.

Keynote is a slideshow application, much like PowerPoint. However, Keynote features iLife integration, so you can include all your iTunes songs, iPhoto pictures, and movies in your template.



The Pages interface

However, as an office application suite, iWork is not yet ready for business use, as it does not feature a spreadsheet application. Users are recommended OpenOffice or Microsoft Office, which are mainstream office application suites.



### 8.4.3 OpenOffice.org

OpenOffice is a free, open source, cross platform office application suite. According to its mission statement, the OpenOffice.org project aims *“to create, as a community, the leading international office suite that will run on all major platforms and provide access to all functionality and data through open-component based APIs and an XML-based file format.”*

OpenOffice.org is a collection of applications including a word processor called Writer, a spreadsheet application called Calc, a presentation program called Impress, a database program called Base, and a graphics editor called Draw.



**Design 3D presentations with Keynote!**

One negative of OpenOffice on OS X is that it does not have a Mac-native interface. Besides, you need to install XII from the OS X DVD in order to run OpenOffice. This is a major issue, especially for professionals. There is another project, NeoOffice, based on OpenOffice; it offers a Mac-native interface.

However, OpenOffice.org is a very good office application suite that enjoys a huge advantage over Microsoft because of its features, ease of use, and the fact that it's free.